
CS1000M IPE Shelf Conversion to CS1000E IP Media Gateway (MG XPEC)

Installation Method – 65-2960

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1.0 General Information

1.1 Description

Purpose:

This document provides steps and procedures to convert UEM (Universal Equipment Module) from a CS1000M system to a IPMG (Internet Protocol Media Gateway) to be hosted by a CS1000E Release 6.0 (or greater) system. The conversion removes the UEM from the CS1000M wired TDM (Time Division Multiplexing) backbone and connects it to the IP (Internet Protocol) network backbone for communications and control by a CS1000E system. The CS1000E system may be existing or new, as long as it is a minimum of Release 6.0.

This document does not cover the process of migrating the existing TN (Terminal Number) database to the hosting CS1000E system. Database migration can be done using TM (Telephony Manager), third party tools, manually re-keyed, or with migration tools still under development as of the writing of this document.

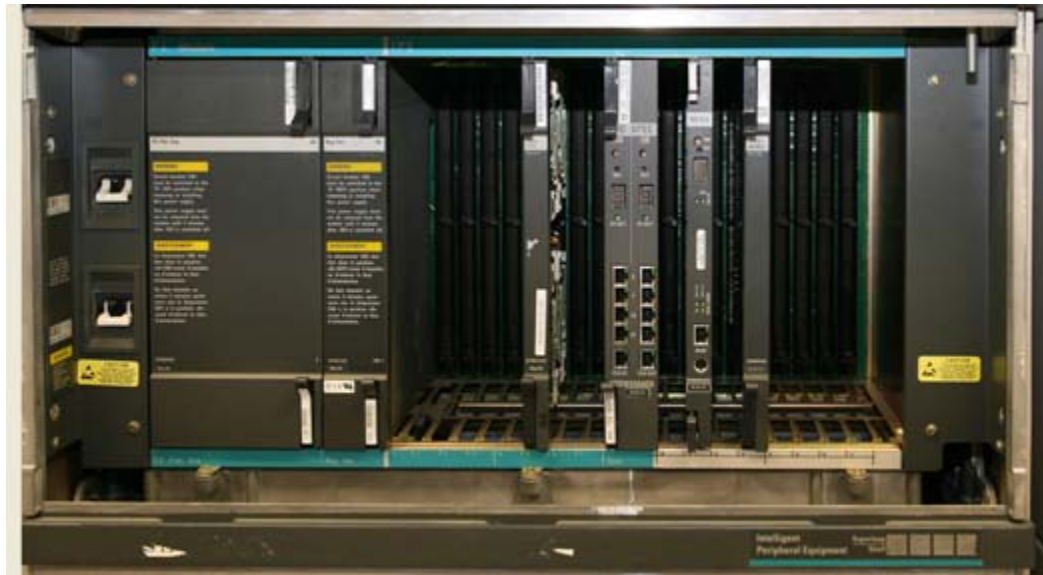
The IPE (Intelligent Peripheral Equipment) UEM is converted by removing the XPEC (Extended Peripheral Equipment Controller) and replacing it with a new MG XPEC (Media Gateway Extended Peripheral Equipment Controller). This allows the UEM to be used as a IP Media Gateway on a CS1000E Release 6.0 (or greater) system.

Supported Platforms:

CS1000M NT8D37 UEM (Universal Equipment Module) can be converted to a IPMG on a CS1000E Release 6.0 (or greater) system.

Application:

The MG XPEC provides customers with a means of converting a CS1000M to a CS1000E. It gives them a solution to migrate from a TDM to an IP (Internet Protocol) solution. The MG XPEC allows the customer to reuse most of their existing peripheral equipment. The MG XPEC transforms a single IPE shelf into 2 IPMG shelves.

Figure 1 – UEM Shelf with MG XPEC Replacing XPEC Controller**Limitations:**

As the current UEM IPE shelf does not support CEMUX (Common Equipment Multiplexing) cards it will still not support them after the MG XPEC is installed. A MGC (Media Gateway Controller) type of IPMG (Internet Protocol Media Gateway) will be required for CEMUX cards such as PRI/digital trunks.

The following IPE packs are supported by the XPEC but are not supported by the MG XPEC after the conversion:

- NT6D70 - BRI SILC Voice/Circuit/Packet Data Lines
- NT6D71 - BRI UILC Voice/Circuit/Packet Data Lines
- NT6D72 - BRSC Basic Rate Concentrator
- NT7D16 - Data Access Line Card

Pre-requisites:

- The MG XPEC is only supported by CS1000E release 6.0 or higher due to the dependency on call server and EM (Element Manager) changes.
- MGC/MG XPEC loadware needs to be updated to support features/functionality of the MGC/MG XPEC controllers.
- CS1000E Release 6.0 UCM (Universal Communications Manager), EM (Element Manager), and SS (Signaling Server) have to be

deployed and functional prior to the UEM XPEC conversion.

- New IPMG super loops will be programmed on the CS1000E Rls. 6.0 system for assignment to the MG XPEC's used in the UEM conversion.
- IP network access ports for MG XPEC connections (ELAN and TLAN) to communicate with CS1000E Rls. 6.0 core system. Network delay of less than 80 msec and .5 percent packet loss.
- The existing TN (Terminal Number) database will have to be converted and migrated into the CS1000E Rls. 6.0 host system. Migration of the UEM TN (Terminal Number) database can be done using TM (Telephony Manager), third party tools, manually re-keyed, or with migration tools still under development as of the writing of this document.

Service Impact:

The UEM is powered down and out of service during the conversion. Converting and migrating one UEM at a time to a CS1000E Release 6.0 system can minimize the service outage.

The user devices assigned to the UEM that is being converted are out of service until the UEM has been converted and assigned as a IPMG on a working CS1000E Release 6.0 system. TN Database migration will also have to be completed for the UEM before service to the users is restored.

Skill Level Requirement:

This Method has been developed to allow maintenance level CS1000 craft persons the ability to convert and commission a CS1000M UEM as a IPMG (Internet Protocol Media Gateway) on a CS1000E Release 6.0 system.

2.0 Material Requirements

2.1 Required Documents

Before using this document:

You must be proficient in all required safety procedures for the geographic location in which you are using this Installation Method.

In geographic locations requiring accreditation, you must have a certificate of accreditation on file with your company.

For information related to safety procedures and access to them, contact your safety prime or your local Installation and Commissioning representative.

CS1000E Release 6.0 General Release Bulletin should be referenced for compatibility, engineering and configuration options.

CS1000E Release 6.0 NTP's should be referenced for issues or configurations not covered in this document.

2.2 Tools & Test Sets

The Tools and Test Sets listed in Table 1 are required to perform this method.

Table 1 – Tools & Test Sets		
Tool / Test Set #	Qty.	Description
N/A	1	Windows Laptop PC supporting DB9 Serial and LAN connections.
N/A	1	Windows serial communications software. (i.e. HyperTerminal™, ProcommPlus™, or PuTTY©)
N/A	1	Serial cable DB9 to DB25
N/A	1	DB9 null modem adapter
N/A	1	Socket set which includes 3/16 and 1/4 inch nut drivers.
N/A	1	Medium straight ended screw driver
N/A	1	Small straight ended screw driver
N/A	1	Phillips #2 screw driver
N/A	1	6 inch side cutters
N/A	1	6 inch pliers

2.3 Supplies

Table 2 – Supplies	
Part Number	Description
N/A	16 small cable ties per UEM to secure MDF cables.
N/A	Indelible ink pen or cable labels to mark UEM filter connectors and MDF cables

2.4 Site Data Requirements / Information

Table 3 – Site Data Requirements / Information
Description
Locations where equipment will be installed.
Terminal access to 1000M, UserID and password
Terminal access to CS1000E, UserID and password
UCM access, FQDN, UserID and password
IP Network Address's assigned to system elements; Call Server ELAN IP address assigned. UCM Security Server FQDN and IP address assigned. CS1000E Call Server ELAN IP address. Super loop and shelf assignment for MG XPEC MB (half) MG XPEC MB (half) ELAN address to be assigned. MG XPEC MB (half) TLAN address to be assigned. DSP1 on MB (half) TLAN address to be assigned. DSP2 on MB (half) TLAN address to be assigned. Customer Number to use for DSP assignment. Zone Number to use for DSP assignment. ELAN Netmask ELAN Gateway TLAN Netmask TLAN Gateway Super loop and shelf assignment for MG XPEC DB (half) MG XPEC DB (half) ELAN address to be assigned. MG XPEC DB (half) TLAN address to be assigned. DSP1 on DB (half) TLAN address to be assigned. DSP2 on DB (half) TLAN address to be assigned. Customer Number to use for DSP assignment. Zone Number to use for DSP assignment. ELAN Netmask ELAN Gateway TLAN Netmask TLAN Gateway
MGTDs and MGCONF loop assignments for MB section of MG XPEC

Table 3 – Site Data Requirements / Information	
Description	
MGTDS and MGCONF loop assignments for DB section of MG XPEC	
DTR TN assignment for MB section of MGXPEC	
DTR TN assignment for DB section of MGXPEC	
MG XPEC XSM port assignment on CS1000E MG XPEC TTY port assignment on CS1000E	

2.5 Software

No additional software required other than that delivered with the Core CS1000E system that will be hosting the UEM's converted with MG XPEC controllers.

Table 4 – Software Media and Delivery	
Part Number	Description

2.6 Hardware

Hardware required will vary dependent on configuration options. The following is a example of part numbers and descriptions of equipment installed and configured in this method.

Table 5 – MG XPEC Upgrade Equipment Listing		
Part Number	Qty.	Description
NTDW20AAE6		MG XPEC (Media Gateway Extended Peripheral Equipment Controller) one per UEM being converted.
NTDW25AAE6		MG XPEC cable kit; > Contents include: 2 new IO Panels 2 NTDW26ABE6 TTY Cables (Pin out same as MG1010) 8 Cat-5e ethernet cables 12 RJ45 couplers 1 Card Slot label
NTDW22AEE5		XSM (Extended System Monitor) that support MG XPEC.
NTDW26BAE6		XSM (Extended System Monitor) cable.
N0211606		MG1010/MG XPEC DB25 serial modem cable (DCE)
N0211605		MG1010/MG XPEC DB9 serial terminal cable (DTE)

2.7 Forms

No additional forms required.

3.0 Precautions and Preparations

3.1 Precautions

Advisory notes are used in the following manner.

	CAUTION/WARNING: Text that identifies system failure, damage to equipment, or a hazardous situation that could result in injury.
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	DANGER: Text that identifies an immediate hazard which could result in death or serious injury.
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3.2 Preparations

It is strongly recommended that this method be read in its entirety before starting the operations presented herein.

Prior to starting the operations presented in this method, arrange all materials, tools, and test equipment at the work location so as to minimize fatigue and inconvenience.

3.3 Check List

Verify the following items have been received and/or accomplished before proceeding with the procedure.

- ☐ Item 1. The CS1000E system hosting the MG XPEC UEM's has been upgraded to minimum Release 6.0.
- ☐ Item 2. CS1000E Release 6.0 UCM (Universal Communications Manager), EM (Element Manager), and SS (Signaling Server) have to be deployed and functional prior to the UEM XPEC conversion.
- ☐ Item 3. New IPMG super loops have been programmed on the CS1000E Rls. 6.0 system for assignment to the MG XPEC's used in the UEM conversion.
- ☐ Item 4. IP network access ports for MG XPEC connections (ELAN and TLAN) to communicate with CS1000E Rls. 6.0 core system. Network performance requires a delay of less than

80 msec and .5 percent packet loss.

- ☐ Item 5. The existing TN (Terminal Number) database has been converted and migrated into the CS1000E Rls. 6.0 host system. Migration of the UEM TN (Terminal Number) database can be done using TM (Telephony Manager), third party tools, manually re-keyed, or with migration tools still under development as of the writing of this document.
- ☐ Item 6. Customer has assigned IP address and FQDN (Fully Qualified Domain Names) for each of the system elements to his DNS server.
- ☐ Item 7. IP network connection and account for installers PC to access and configure CS1000E system elements.
- ☐ Item 8. Access to CS1000M maintenance terminal with current "User ID" and "Password".
- ☐ Item 9. TDS (Tone and Digit Sender) and Conference loops to be assigned to the new UEM super loops.
- ☐ Item 10. XSM and TTY ports to be assigned to the new MG XPEC controllers.

4.0 Procedure

IPE UEM Hardware Conversion and Commissioning

	CAUTION: The following tasks will cause an interruption in service for users serviced by the UEM shelf being migrated to the CS1000E Call Server.
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CS1000M systems are non-redundant at the IPE shelf level. These procedures are used to convert the IPE UEM from a CS1000M IPE shelf to a CS1000E IP Media Gateway. During this process the IP UEM will be powered down and the users assigned to this UEM will be out of service until the migration of the hardware and the software (database assignments) have been completed to the CS1000E Call Server with TN database to support the users.

This document does not cover the process of migrating the existing TN (Terminal Number) database to the hosting CS1000E system. Database migration can be done using TM (Telephony Manager), third party tools, manually re-keyed, or with migration tools still under development as of the writing of this document. Database migration may involve using one or more of the above mentioned options.

4.0.1 (Laptop PC) Configure TLAN Address for Upgrade

The Laptop will have to be configured to have access to Tlan and Elan of the CS1000E system elements during upgrade and configuration of the system elements. To provide this access you can configure the Laptop with static IP address, subnet mask and Default Gateway addresses. The customers network can assign access through DHCP, you will probably need a network access ID and password configured. This procedure provides information on setting a static IP to the installer laptop.

Pre-requisites:

1. Windows XP Laptop with network interface capability.
2. Site Spec. Book giving IP network configuration parameters to be used.

- Tlan IP
- Tlan subnet mask
- Tlan Gateway IP
- DNS IP

(Note: If DNS server has not been configured for CS1000E servers there is a work around. The installer can add IP address and FQDN, host name with domain of all the CS1000E system servers to his/her PC windows hosts file located in C:/windows/system32/drivers/etc folder. Otherwise the installer will have to log on each time when accessing another system element through UCM.)

Procedure 1 – (Laptop PC) Configure Tlan Address for Upgrade (Page 1 of 5)		
Step	Action	Observation
1	Change the IP address on the installer's Laptop PC as indicated below. Navigate to Start -> Connect To -> Show all connections. Right-click on the Local Area Connection corresponding to the PC's wired ethernet port. Select Properties.	

Procedure 1 – (Laptop PC) Configure Tlan Address for Upgrade (Page 2 of 5)

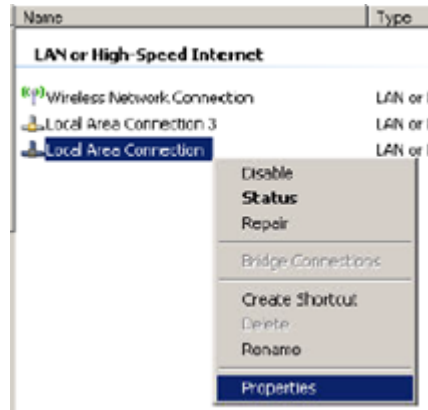
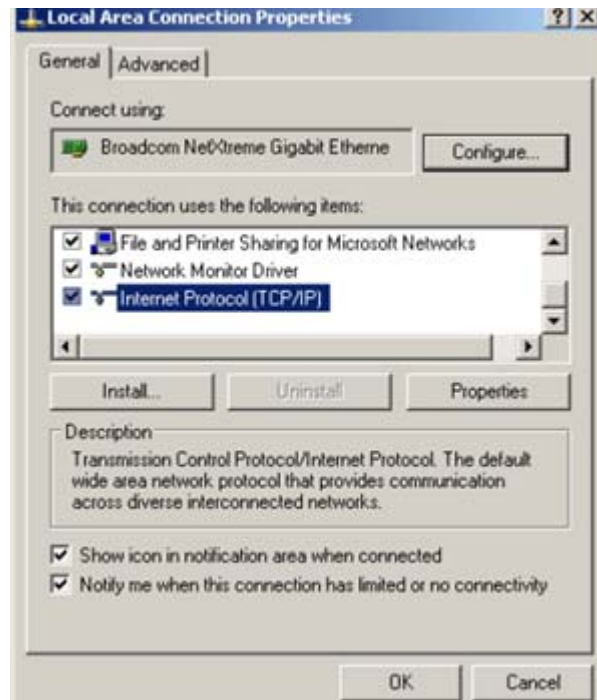
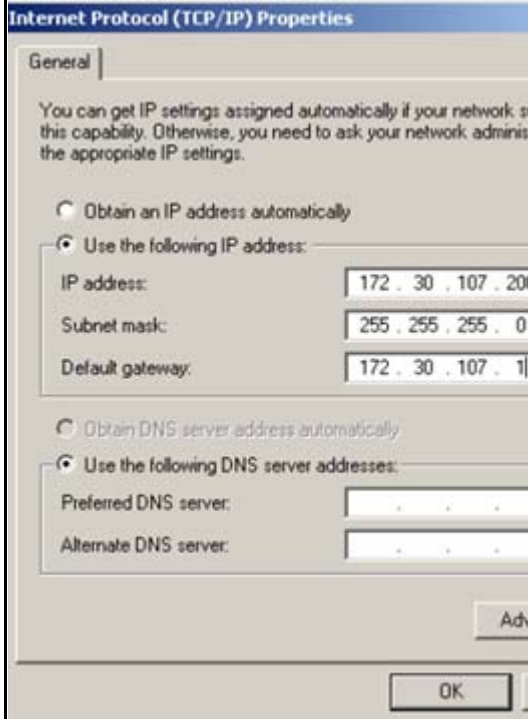
Step	Action	Observation
2	Change the IP address on the installer's Laptop PC as indicated below. Navigate to Start -> Connect To -> Show all connections. Right-click on the Local Area Connection corresponding to the PC's wired ethernet port. Select Properties.	

Figure 2 – Interface Card Properties

Procedure 1 – (Laptop PC) Configure Tlan Address for Upgrade (Page 3 of 5)		
Step	Action	Observation
3	Select, Internet Protocol (TCP/IP) from the Properties page.	
4	Assign IP configuration to match customers Tlan. Select, "Use the following IP address" Enter, IP address: _____ Enter, Subnet mask: _____ Enter, Default gateway: _____ Select, "Use following DNS server" Enter, Preferred DNS IP: _____ Select, "OK button" to save and exit. Select, "OK button" on the properties page to save and exit.	(Note: If DNS server has not been configured for CS1000E servers there is a work around. The installer can add IP address and FQDN, host name with domain of all the CS1000E system servers to his/her PC windows hosts file located in C:/windows/system32/drivers/etc folder. Otherwise the installer will have to log on each time when accessing another system element through UCM.)
5	Connect Laptop to an available TLAN port on the ethernet switch hosting the CS1000E system.	

Procedure 1 – (Laptop PC) Configure Tlan Address for Upgrade (Page 4 of 5)		
Step	Action	Observation
6	(Add FQDN's to hosts file) If FQDN's for Rls. 6.0 system elements have been defined on DNS server you are done with this procedure. Skip to the "End of Procedure". If the DNS server has not been updated with the FQDN of the Rls. 6.0 system elements, the following work around will provide instructions to add IP and FQDN's to your PC hosts file. Select, Start > Run from your PC control bar. Enter, cmd and Click "OK" to open a DOS command window. Enter, c: <Enter> Enter, cd c:\windows\system32\drivers\etc <Enter> Enter, edit hosts <Enter> Input, Alt+F keys to open the File Menu. Input, "a" to select "Save As" function. Enter, hosts.old to save your current hosts file to hosts.old. Use Tab key to select the "OK" button and <Enter> to save file a copy of your original hosts file.	

Procedure 1 – (Laptop PC) Configure Tlan Address for Upgrade (Page 5 of 5)		
Step	Action	Observation
7	Under 127.0.0.1 Localhost, Edit file to include IP and FQDN of System Elements. Enter, new line with IP address and FQDN of Rls. 6.0 system element to be installed. Enter, Additional IP and FQDN for the additional system elements to be installed. (Example: 192.168.10.10 cs1000e-sys2.Avaya.com) Note: Refer to Site Spec. Book for this data. Input, Alt+F keys to open the File Menu. Input, "a" key to select the "Save As" function. Input, hosts to save file as the new hosts file. Use Tab key to select the "OK" button and <Enter> to save the new updated hosts file. Select, Alt+F keys and x key to exit editor. Enter, exit <Enter> to close the DOS window.	
End of Procedure		

4.0.2 (Laptop PC) Configuring Internet Explorer Browser

Use the following procedure to configure Internet Explorer browser settings.

Pre-requisites:

1. Element Manager and NRS Manager requires Microsoft Internet Explorer 6.0.2600 or higher with Service Pack 1. (Note: Netscape browser is not supported.)
2. The Element Manager Virtual Terminal Environment requires the Java Runtime Environment (JRE) 1.5. (Download java updates from "<http://java.sun.com/javase/downloads/index.jsp>".)

Note: The interface for the Internet Explorer browser settings and Windows Display settings can vary by Windows and browser versions.

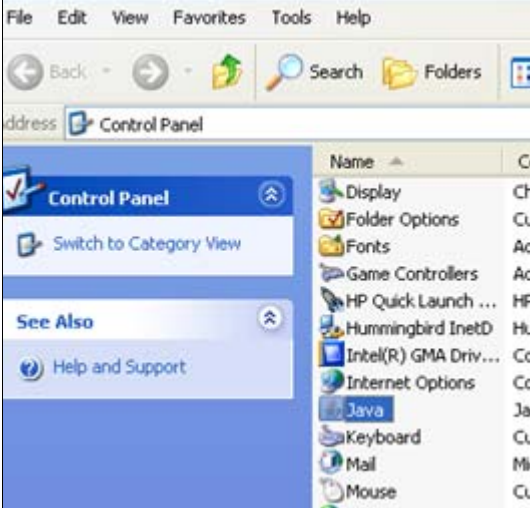
Enabling pop-ups

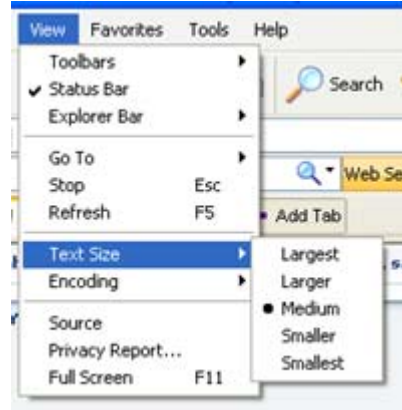
If you use a browser search utility (such as the Google™ search engine or the Yahoo!™ search engine), ensure that pop-ups are enabled. Enabling pop-up windows is usually done at the toolbar of the search utility.

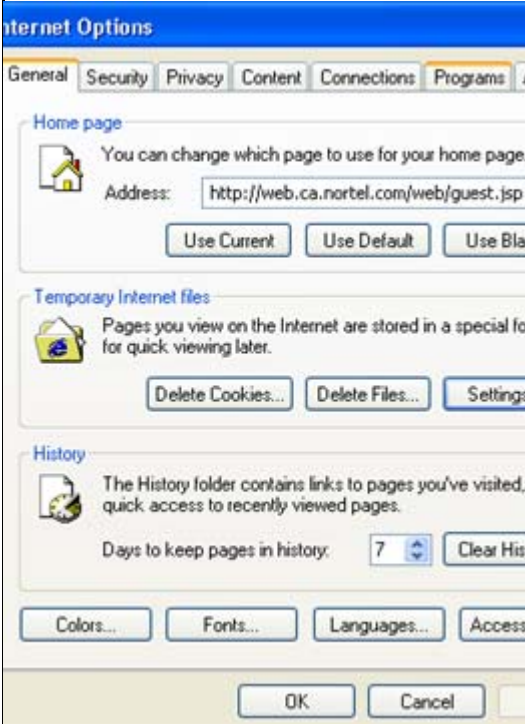
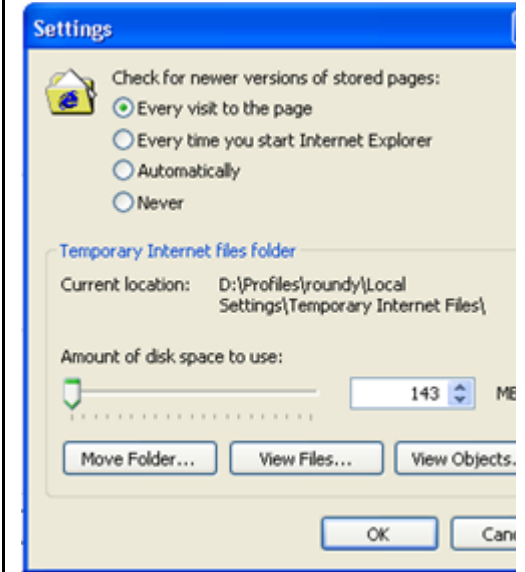
Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 1 of 7)		
Step	Action	Observation
1	Verify your PC is running Microsoft Internet Explorer 6.0.2600 or higher with Service Pack 1. Launch Internet Explorer by Clicking on the Internet Explorer ICON . 	Internet Explorer Browser opens to your WEB Home Page.
2	From Internet Explorer Control Bar Select, Help and About Internet Explorer .	

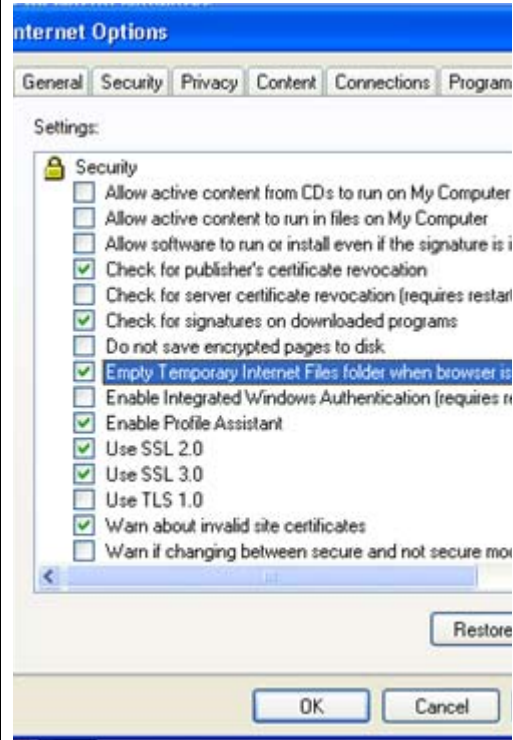
Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 2 of 7)		
Step	Action	Observation
Figure 3 – About Internet Explorer 		
3	Verify Internet Explorer is 6.0.2600 with Service Pack 1 or Higher.	
Figure 4 – Internet Explorer Version 		
4	If you need an update for Internet Explorer browser Go To http://www.microsoft.com/download and search for "Internet Explorer 6 SP1". Install Internet Explorer Updates before continuing.	

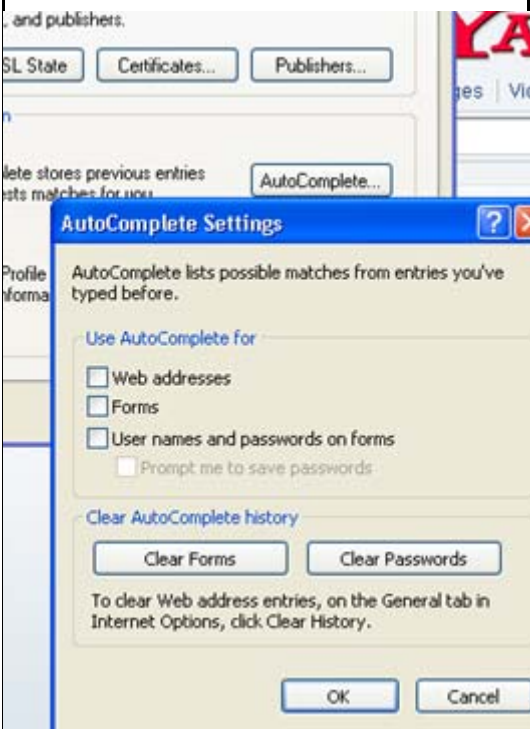
Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 3 of 7)

Step	Action	Observation
5	Verify your Windows PC has Java Run Time Environment (JRE) installed. From your Windows Desktop, Select, Start, Settings and Control Panel. Check that Java is Installed. Note: If Java is not in the Control Panel you can download Java Runtime Environment (JRE) from "http://java.sun.com/javase/downloads/index.jsp". Ensure Java is installed before continuing.	 The screenshot shows the Windows Control Panel window. The 'Java' icon is highlighted in the list of control panel items on the right side. The left pane shows 'Control Panel' and 'Switch to Category View'.
6	Turn off Pop-up Blocker in Internet Explorer. Launch internet Explorer. From the Control Panel, Select, Tools and Pop-up Blocker. If you are presented with an option to "Turn On Pop-up Blocker", it is already turned off. Leave it in this mode and continue with the next Step below. If you are presented with an option to "Turn Off Pop-up Blocker", then Click on "Turn Off Pop-up Blocker".	 The screenshot shows the Microsoft Internet Explorer browser window. The 'Tools' menu is open, and 'Pop-up Blocker' is selected. The address bar shows 'http://www.google.com'.
7	(Google Search Bar Only) Turn off Pop-up Blocker on the Google Internet Search Bar. From the Google Search Bar Select the Toolbar Symbol to open Toolbar Options 	

Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 4 of 7)		
Step	Action	Observation
8	(Google Search Bar Only) From the Google Toolbar Option Page, Select, Tools Link, to open the Tools Options. Uncheck Pop-up Blocker, Save and Close the Toolbar Option Page.	
9	(Yahoo Search Bar Only) Turn off Pop-up Blocker on the Yahoo Internet Search Bar. From the Yahoo Search Bar Select, Pop-up Blocker drop down menu. Ensure "Enable Pop-up Blocker is Unchecked. If it has a Check Mark, then Select, "Enable Pop-up Blocker" to disable it.	
10	Set Internet Explorer to Medium Text display. From Internet Explorer Control Panel, Select, View and Text Size. Select, "Medium".	

Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 5 of 7)		
Step	Action	Observation
11	Set Internet Explorer to refresh Temporary Files each time you visit a WEB page. From Internet Explorer Control Panel, Select, Tools and Internet Options.	 The screenshot shows the 'Internet Options' dialog box with the 'General' tab selected. The 'Temporary Internet files' section is visible, showing a folder icon and the text 'Pages you view on the Internet are stored in a special folder for quick viewing later.' Below this, there are buttons for 'Delete Cookies...', 'Delete Files...', and 'Settings...'. The 'Delete Files...' button is highlighted.
12	Select, Settings button from the Temporary Internet Files section.	 The screenshot shows the 'Settings' dialog box for 'Temporary Internet files'. The 'Check for newer versions of stored pages' section has four radio buttons: 'Every visit to the page' (selected), 'Every time you start Internet Explorer', 'Automatically', and 'Never'. Below this, the 'Temporary Internet files folder' section shows the 'Current location' as 'D:\Profiles\roundy\Local Settings\Temporary Internet Files\'. There is a slider for 'Amount of disk space to use' set to 143 MB. At the bottom, there are buttons for 'Move Folder...', 'View Files...', 'View Objects...', 'OK', and 'Cancel'.

Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 6 of 7)		
Step	Action	Observation
13	Select, "Every visit to the page" option and "OK" to save and close. Select, "OK" to close "Internet Options" tools page.	
14	Set Internet Explorer to empty temporary files when browser is closed. From Internet Explorer Control Panel, Select, Tools and Internet Options.	
15	From the Internet Options screen Select, Advanced Tab.	
16	From the Advanced screen Scroll Down to the Security section. Put a Check in "Empty Temporary Internet Files folder when browser is closed". Check, "Apply" and "OK", to save changes and exit "Internet Options".	 The screenshot shows the 'Internet Options' dialog box with the 'Security' tab selected. Under the 'Settings' section, the 'Empty Temporary Internet Files folder when browser is closed' checkbox is checked. Other visible settings include 'Check for publisher's certificate revocation' (checked), 'Check for server certificate revocation' (checked), 'Check for signatures on downloaded programs' (checked), 'Do not save encrypted pages to disk' (unchecked), 'Enable Integrated Windows Authentication' (unchecked), 'Enable Profile Assistant' (checked), 'Use SSL 2.0' (checked), 'Use SSL 3.0' (checked), 'Use TLS 1.0' (unchecked), 'Warn about invalid site certificates' (checked), and 'Warn if changing between secure and not secure mo' (unchecked). The 'Restore' button is visible at the bottom right.

Procedure 2 – (Laptop PC) Configure Internet Explorer Browser (Page 7 of 7)		
Step	Action	Observation
17	Disable "Auto Complete" options in Internet Explorer. From Internet Explorer Control Panel, Select, Tools, and Internet Options. Select, "Content Tab", and "Auto Complete" button on the Content screen. De-select all three options under "Use AutoComplete for". Un-Check, Web address. Un-Check, Forms. Un-Check, User names and passwords. Click, "OK" to save and exit. Click, "OK" to save and exit "Internet Options" screen.	
End of Procedure		

4.0.3 IPE UEM Hardware Conversion to IPMG Using MG XPEC

This procedure outlines a phased UEM migration, converting and activating one IPE UEM Shelf at a time.

Pre-requisites:

1. The CS1000E system hosting the MG XPEC UEM's has been upgraded to minimum Release 6.0.
2. CS1000E Release 6.0 UCM (Universal Communications Manager), EM (Element Manager), and SS (Signaling Server) have to be deployed and functional prior to the UEM XPEC conversion.
3. New IPMG super loops have been programmed on the CS1000E Rls. 6.0 system for assignment to the MG XPEC's used in the UEM conversion.
4. IP network access ports are ready for MG XPEC connections (ELAN and TLAN) to communicate with CS1000E Rls. 6.0 core system. Network performance requires a delay of less than 80 msec and .5 percent packet loss.
5. The existing TN (Terminal Number) database has been converted and migrated into the CS1000E Rls. 6.0 host system. Migration of the UEM TN (Terminal Number) database can be done using TM (Telephony Manager), third party tools, manually re-keyed, or with migration tools still under development as of the writing of this document.
6. Customer has assigned IP address and FQDN (Fully Qualified Domain Names) for each of the Linux Base system elements to his DNS server. (UCM server, Signaling Server, NRS server, SIP Lines server).
7. IP network connection and account for installers PC to access and configure CS1000E system elements.
8. Access to CS1000M maintenance terminal with current "User ID" and "Password".
9. Access to CS1000E Rls. 6.0 maintenance terminal with "User ID" and "Password".
10. MG XPEC hardware to upgrade the individual IPE UEM shelves is available on site. See the hardware upgrade equipment listed in the table below. Quantity will be dependent on the number of IPE UEM shelves being converted.
11. Determine if Power Failure units are installed at the site

and if the customer wants the unit to be activated during this conversion process.

Table 6 – MG XPEC Upgrade Equipment Listing		
Part Number	Qty.	Description
NTDW20AAE6		MG XPEC (Media Gateway Extended Peripheral Equipment Controller) one per UEM being converted.
NTDW25AAE6		MG XPEC cable kit > Contents include: 2 new IO Panels 2 NTDW26ABE6 TTY Cables (Pin out same as MG1010) 8 Cat-5e ethernet cables 12 RJ45 couplers 1 Card Slot label
NTDW22AEE5	1	XSM (Extended System Monitor) that support MG XPEC. (one per system)
NTDW26BAE6	1	XSM (Extended System Monitor) cable. (one per system)
N0211606		MG1010/MG XPEC DB25 serial modem cable (DCE)
N0211605		MG1010/MG XPEC DB9 serial terminal cable (DTE)

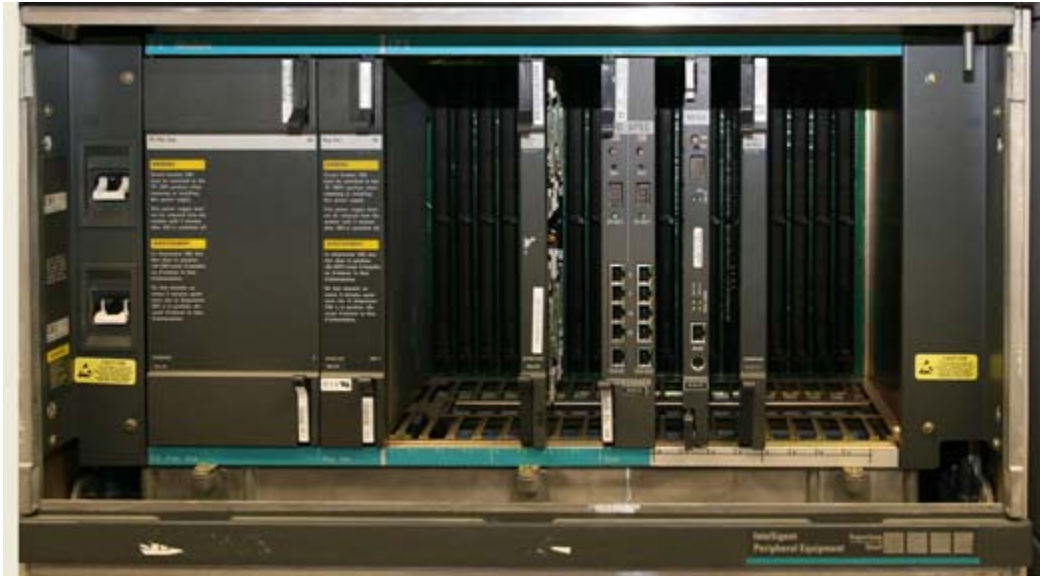
Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 1 of 15)		
Step	Action	Observation
	CAUTION: The following task will cause an interruption in service for users serviced by the UEM shelf being migrated to the CS1000E RIs. 6.0 Call Server. Service will not be restored until the MG XPEC conversion is done and the TN database has been migrated to the host CS1000E Call Server.	
	1 The following procedures outline a phased UEM migration, converting and activating one IPE UEM Shelf at a time.	

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 2 of 15)		
Step	Action	Observation
2	(If Power Fail Transfer Units are equipped) Determine with the customer if they want the Power Fail Unit to activate during the conversion or not. Major Alarms from the XSM (System Monitors) will activate the Power Fail Units during this procedure. If they do not want Power Fail Units to activate. Cross connect wires between the XSM and the Power Fail Unit on the MDF will have to be removed. Remove LFBENR and LFBEN jumpers from MDF.	Power Failure Connections
3	Determine which UEM shelf and super loops assigned in this shelf to be convert first. UEM can have 1 to 4 super loops assigned based on configuration parameters. The UEM shelf should be labeled as to which super loops are assigned.	
4	Remove front cover on IPE UEM shelf that is being converted. Take note of the super loop assignments for this UEM shelf.	

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 3 of 15)		
Step	Action	Observation
5	Logon to the CS1000M system using customer provided terminal. Hit the <Enter> key. At the prompt, type: LOGI <Enter> Enter the user ID. admin1 (or the assigned maintenance user ID) Enter the password assigned for this site. (example: 8899) Note: User ID and Password provided by site contact.	System responses: TTY 04 SCH MTC TRF BUG OSN 14:48 OVL111 IDLE 0 >USERID? PASS?
6	Load Overlay Configuration Record 2 Print Superloops and XPEs. LD 97 <Enter> REQ PRT <Enter> TYPE SUPL <Enter> Log super loop assignments.	Superloops and XPEs configured are printed.
7	Exit Overlay 97 and load "Network Diagnostics" to print and disable Super Loops. REQ **** <Enter> LD 32 <Enter> NPR000 . STAT <Enter>	Prints status of all Super Loops.
8	Disable super loops assigned to this UEM shelf. . DISL sl <Enter> where sl = super loop # Repeat this command for each super loop assigned in this UEM shelf. (Up to 4 super loops can be assigned to the UEM shelf) . STAT sl <Enter> where sl = super loop # Repeat this step for each super loop assigned in this UEM shelf. (Up to 4 super loops can be assigned to the UEM shelf)	Super loop is disabled. Status of super loop will display as "disabled"

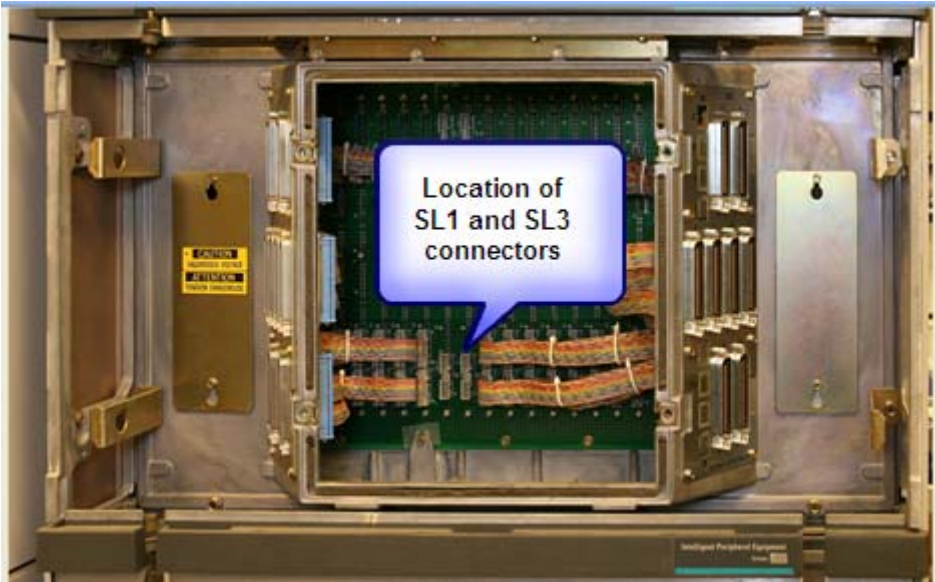
Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 4 of 15)

Step	Action	Observation
9	Turn Off the breakers CB1 and CB2 for the power supply and ring generator on the left side of the UEM shelf.	See location of breakers in figure below.

Figure 5 – Front view of UEM shelf

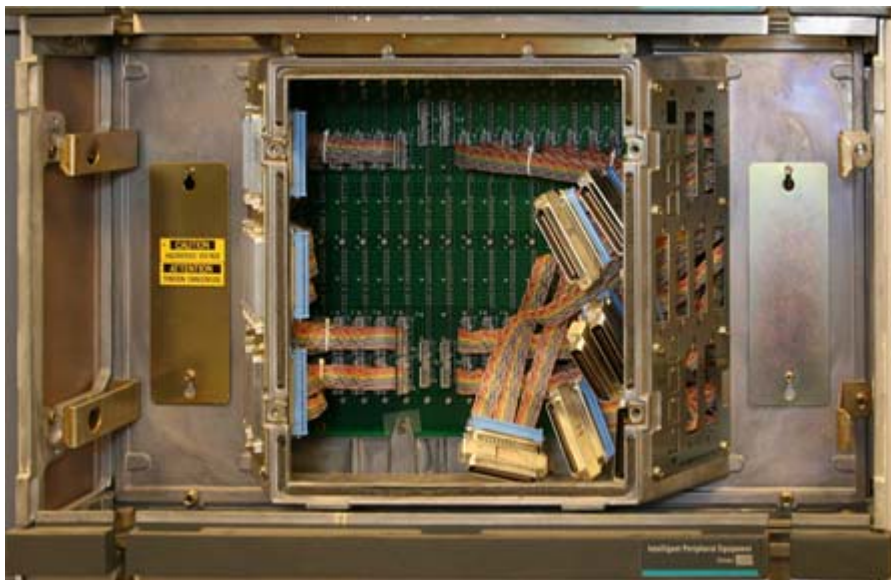
10	Remove the old XPEC card from the "Cont" slot in the center of the shelf. Insert the new MG XPEC card into the "Cont" slot at the center of the shelf. Install the new slot label on the right side of the shelf. The slots on the right will now be slots 0-7 controlled by the DB (Daughter Board) portion of the new MG XPEC card.	
11	Move to the rear of the UEM shelf. Remove the rear cover from the UEM shelf. Remove the center cover that encloses the UEM back plane.	

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 5 of 15)

Step	Action	Observation
Figure 1 – Remove SL0, SL1, SL2 and SL3 DS30Y cables 		
12	Detach any DS30Y super loop cables that may be on connectors SL0, SL1, SL2 or SL3. The IPE shelf can support up to 4 super loops each with a DS30Y cable. SL0 and SL1 are on the top of the shelf and SL1 and SL3 are on the bottom of the shelf. These cables will not be used with the New MG XPEC controller. The cables must be removed to ensure that they do not interfere with the new MG XPEC card.	
13	The UEM is equipped with 8, 25 pair MDF amphenol cables on each side. These cables will need to be labeled A-H on the right side and K-U on the left side. Labels are required so they do not get mixed up while the panel and cables are removed and re-attached to the new panels. Label all 16 MDF cables at this time. Use indelible marker or tape labels.	

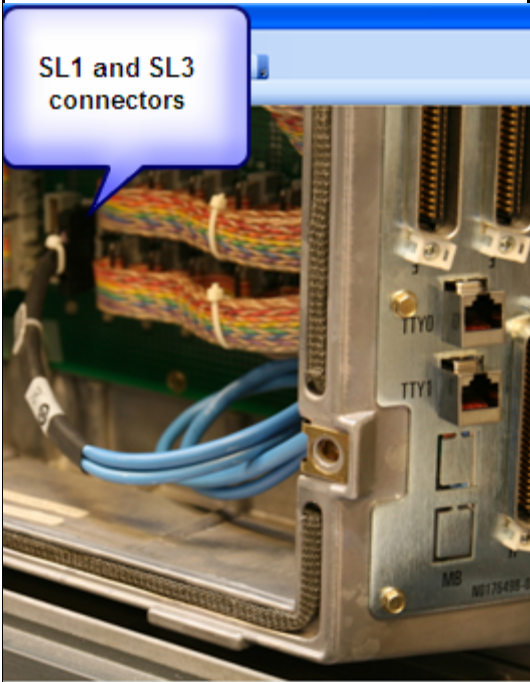
Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 6 of 15)

Step	Action	Observation
14	Amphenol Cable Panels must be replaced to support MG XPEC connections. Note: Start with the panel on the "back right" side and follow steps through step 19 below. Come back and do the "back left" side after the right side is complete. Follow steps through step 19 a second time. Unscrew the upper 3/16 inch hex nut and lower screw that connects each MDF cable to the I/O panel. Mark the internal connector with the Panel Slot it was attached to. (A-U where it was located). (retain the hardware for reuse with the new panel. The bottom of the cable may be secured with small cable ties. Cut these ties and replace them when you re-install the cables to the new panel.)	

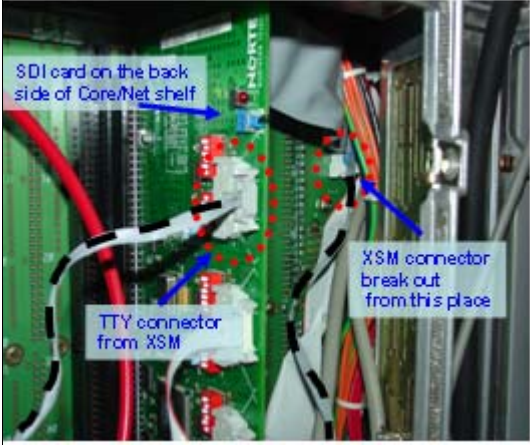
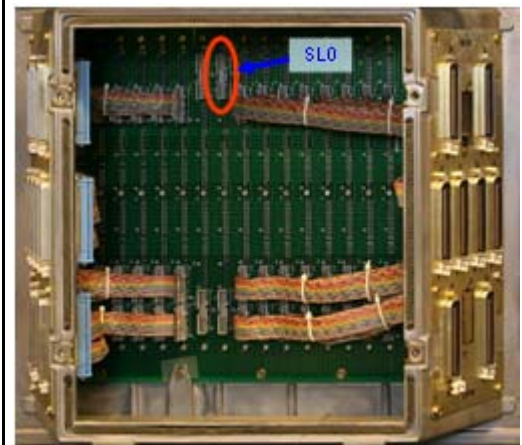
Figure 2 – Remove 8 MDF Amphenol connectors

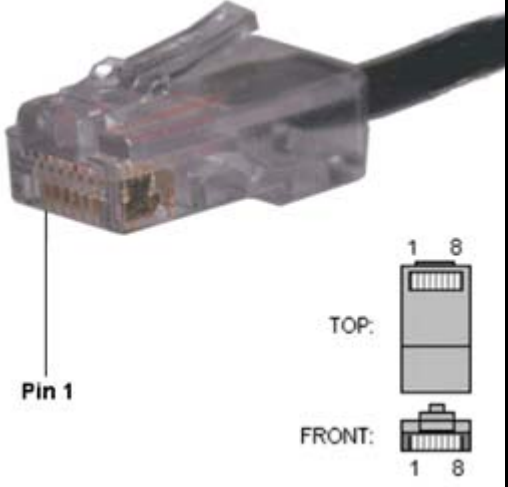
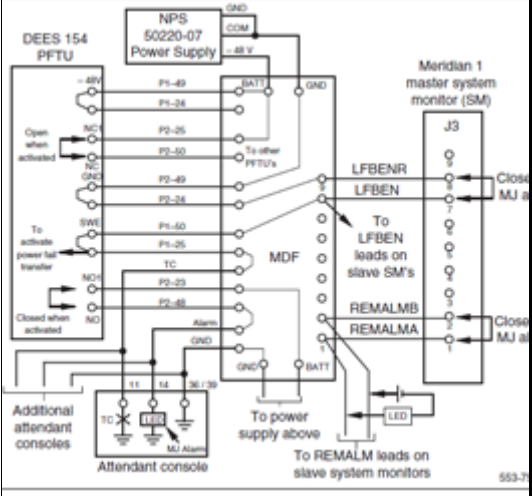
Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 7 of 15)		
Step	Action	Observation
15	Remove the 8, 1/4 inch Hex nuts/screws from the side panel and replace it with the new MG XPEC side panel. Attach the new panel with the 8 Hex nut/screws. (The panel marked MB (Mother Board) goes on the "back right" and the panel marked DB (Daughter Board) goes on the "back left" side.) (The MG XPEC card is divided into two controllers. The Mother Board controls the "front left" side of the shelf and the Daughter Board controls the "front right" side of the shelf.)	MG XPEC Amphenol Panel 
16	Attach the 8 amphenol connectors to the new MG XPEC panel using the hex nuts and screws that were removed. (Ensure cables from slots 0-7 are connected to A-H on the new I/O panel "right rear". Ensure cables from slots 8-15 are connected to K-U on the new I/O panel "left rear".)	Re-attach MDF Amphenol Connectors 

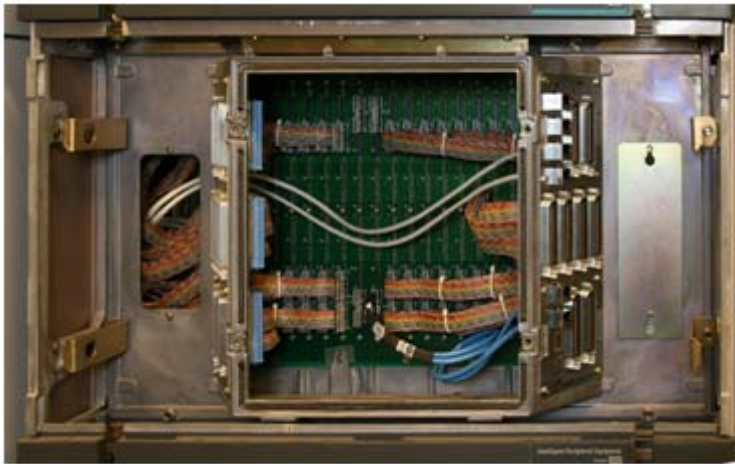
Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 8 of 15)		
Step	Action	Observation
17	Re-connect the MDF cables. Ensure cables are replaced to the correct amphenol A-H for "right rear". Ensure cables from slots 8-15 are connected to K-U on the new I/O panel "left rear". Secure the amphenol cables with the screw on the top and a small cable tie at the bottom of each cable.	MDF cables are re-connected.
18	Remove 6 metal punch-outs labeled for the four ethernet and two TTY openings on the new I/O panel.	
19	Install the 6 RJ-45 Couplers in the I/O panel. Insert the new couplers from the back of the panel with the spring clip on the bottom of the coupler. Spring clip will secure the coupler to the panel.	I/O Couplers Installed 
20	Go back to Step: 13 and follow the same instructions for the cables and panel on the left rear of the UEM shelf.	

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 9 of 15)		
Step	Action	Observation
21	Align the P1 connector of the new NTDW26ABE6 TTY cables with backplane connector SL1 (Note the orientation of the arrow labeled "UP" on the P1 connector). Connect the NTDW26ABE6 TTY cable between SL1 and the TTY connection couplers on the MD Right side I/O panel. TTY 0 cable to coupler TTY 0 TTY 1 cable to coupler TTY 1 Connect another NTDW26ABE6 TTY cable between SL3 and the TTY connection couplers on the DB Left side I/O panel. TTY 0 cable to coupler TTY 0 TTY 1 cable to coupler TTY 1	MG XPEC TTY Connections 

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 10 of 15)		
Step	Action	Observation
22	Determine which column/stack will be the Master for the XSM (System Monitor) (Perform this Step only if this column/stack has the Master XSM System Monitor) A new system monitor card and cable will be installed for the Master XSM in the chain of XSM (System Monitors). The Master XSM is cabled to the Core/Net shelf in the column. The new XSM cable will be connected between the XSM connector and the SL0 connector on the new MG XPEC shelf. This port will be configured as a XSM port on the CS1000E host system. Remove the pedestal cover at the rear of the column. The XSM card can be safely removed without turning off power to the column. Remove the existing Master XSM card from the base pedestal by un-screwing the spring loaded screws. Set the option switches on the new (NT8D22AEE5) XSM card with the same switch settings as the one you removed. In addition set sw 1-1 = off and sw 2-2 = on, which is required to support the MG XPEC card. The XSM card can be safely installed without turning off power to the column. Insert the new XSM card into the base pedestal.	

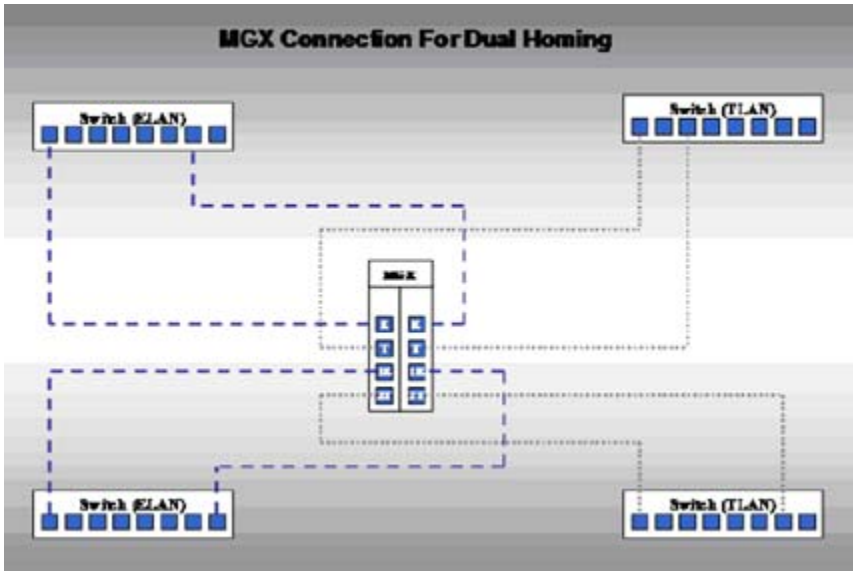
Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 11 of 15)		
Step	Action	Observation
23	(Perform this step only if you are activating the new Master XSM card. Otherwise skip to the next Step.) Locate the old XSM connection on the Core/Net back plane. You will have to remove the back cover and internal center cover to expose these connections. Remove the old XSM cable between the SDI card and the XSM breakout connector P3. Insert the new XSM cable NTDW26BAE6 into the XSM breakout connector P3.	Old XSM Connection: 
24	(Perform this step only if you are activating the new Master XSM card. Otherwise skip to the next Step.) Route the new XSM cable to the UEM shelf in this column that has been converted with MG XPEC card. Insert the P-1 plug into SL0 back plane connector on the converted UEM shelf. This TTY port will be configured on the CS1000E host system as User = XSM for alarm reporting. Remove the bottom punch out for an additional RJ-45 coupler on the MB panel with the XSM cable attached to the SL0 connector. Insert an additional RJ-45 coupler in the punch out and label it as XSM PFT. Insert J2, RJ-45 of the XSM cable into the RJ45 coupler.	XSM Connects to UEM 

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 12 of 15)		
Step	Action	Observation
25	(Perform this step only if you are activating the new Master XSM card. Otherwise skip to the next Step.) Using Cat 5 RJ45 connect J2, XSM cable to the MDF frame and terminate the wires on a connection block. J2 pin 1 = LFBEN and J2 pin 2 = LFBENR leads to the PFT (Power Fail Transfer) unit.	RJ-45 Pin Count: 
26	(Perform this step only if you are activating the new Master XSM card. Otherwise skip to the next Step.) Cross connect the new LFBENR and LFBEN leads from the new XSM J2 cable to the PFT (Power Fail Transfer) unit in parallel with the old XSM connections for LFBENR and LFBEN. Replace the "Center Cover" on the Core/Net shelf. Replace the "back cover" on the Core/Net shelf. Replace the XSM pedestal cover.	Power Failure Connections 

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 13 of 15)		
Step	Action	Observation
27	Extend the MG XPEC MB (Mother Board) lan connections through the cable channel of the chassis to the I/O couplers on the back panel. (Use supplied shielded ethernet cables) Connect Face Plate MB E Lan to the E Lan coupler on the I/O panel. Connect Face Plate MB T Lan to the T Lan coupler on the I/O panel.	
28	Figure 6 – Lan Connections Extended to I/O Panel 	
29	Extend the MG XPEC MB (Mother Board) lan connections through the cable channel of the chassis to the I/O couplers on the back panel. (Use supplied shielded ethernet cables) Connect Face Plate MB 1E Lan to the CE Lan coupler on the I/O panel. Connect Face Plate MB 1T Lan to the CT Lan coupler on the I/O panel.	

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 14 of 15)		
Step	Action	Observation
30	Extend the MG XPEC DB (Mother Board) lan connections through the cable channel of the chassis to the I/O couplers on the back panel. (Use supplied shielded ethernet cables) Connect Face Plate DB E Lan to the E Lan coupler on the I/O panel. Connect Face Plate DB T Lan to the T Lan coupler on the I/O panel.	
31	Extend the MG XPEC DB (Mother Board) lan connections through the cable channel of the chassis to the I/O couplers on the back panel. (Use supplied shielded ethernet cables) Connect Face Plate DB 1E Lan to the CE Lan coupler on the I/O panel. Connect Face Plate DB 1T Lan to the CT Lan coupler on the I/O panel.	
32	Replace "Center Cover" on the back of the UEM shelf.	
33	Attach MB E Lan port from I/O panel to the customer's E Lan data switch port. Attach DB E Lan port from I/O panel to the customer's E Lan data switch port.	
34	Attach MB T Lan port from I/O panel to the customer's T Lan data switch port. Attach DB T Lan port from I/O panel to the customer's T Lan data switch port.	

Procedure 3 – IPE UEM Hardware Conversion to IPMG Using MG XPEC (Page 15 of 15)

Step	Action	Observation
Figure 7 – Dual Homing Connections (optional) 		
35	Set CB1 and CB2 breakers to "ON" for the power supply and ring generator of the UEM module. Breakers are located on the front left of the UEM module.	
36	Hardware conversion is now complete. Continue with MG XPEC Setup and Configuration.	
End of Procedure		

4.0.4 (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware

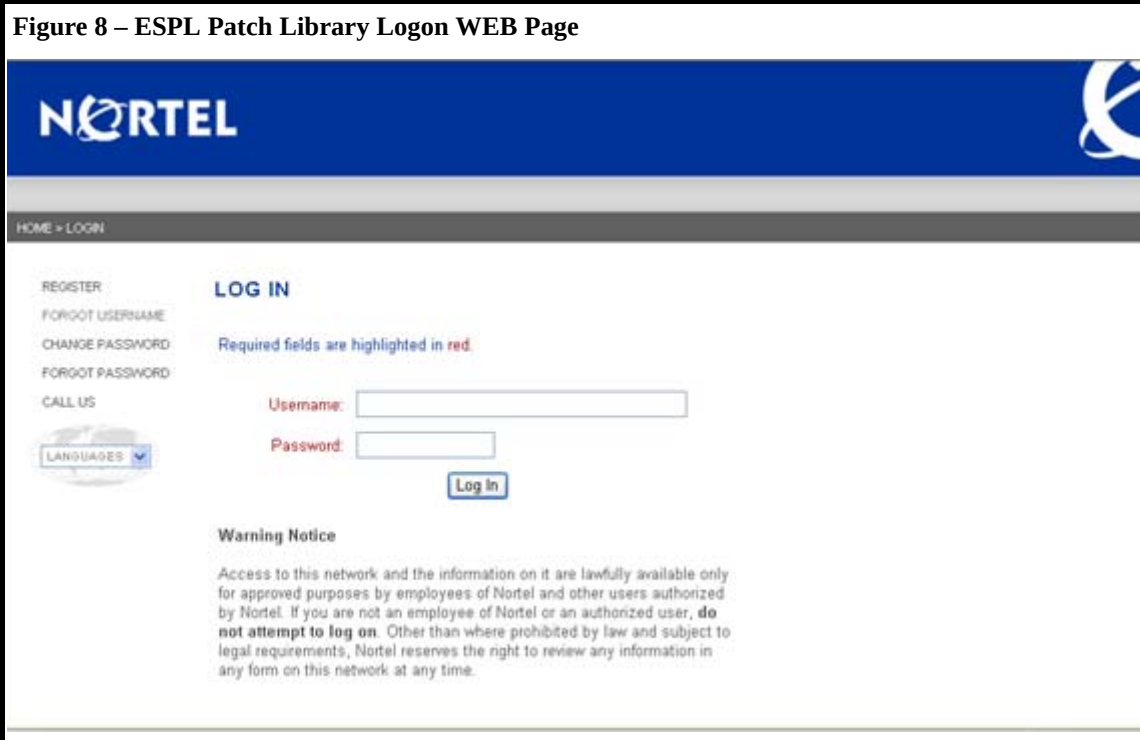
MGC and MG XPEC cards use the same loadware. Media Gateway Controller (MGC) and MG XPEC cards periodically need to be patched to correct a feature or malfunction of the card. The loadware patch files are acquired from Avaya's Enterprise Patch Portal at "<http://www.nortel.com/espl>". These updated loadware files are then uploaded to CS1000 Element Manager for Installation and Activation.

Pre-requisites:

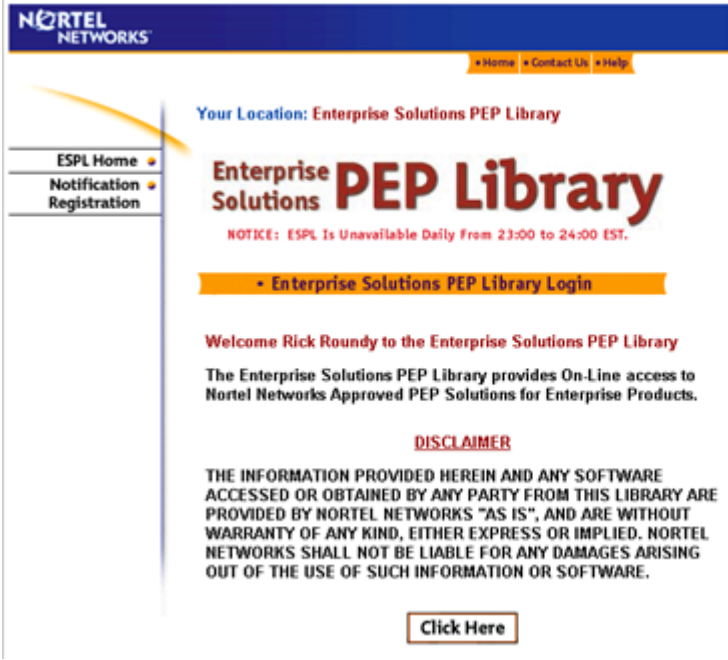
1. Windows PC with Internet Explorer 6.0, and PKZip utility installed.
2. High speed internet connection to access <http://www.nortel.com/espl> Avaya Web Patch Portal.
3. Enterprise Solutions Patch Library (ESPL) user ID and password for deplist and patch downloads.
4. UCM Fully Qualified Domain Name FQDN assigned during installation.
5. UCM "admin" password assigned during UCM configuration.

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 1 of 12)		
Step	Action	Observation
1	Using a Windows PC with high speed internet connection log on to Avaya Enterprise Solutions PEP Library WEB site. (http://www.nortel.com/espl) Enter, http://www.nortel.com/espl into your Internet Browser.	The ESPL Patch Logon WEB Page is displayed.

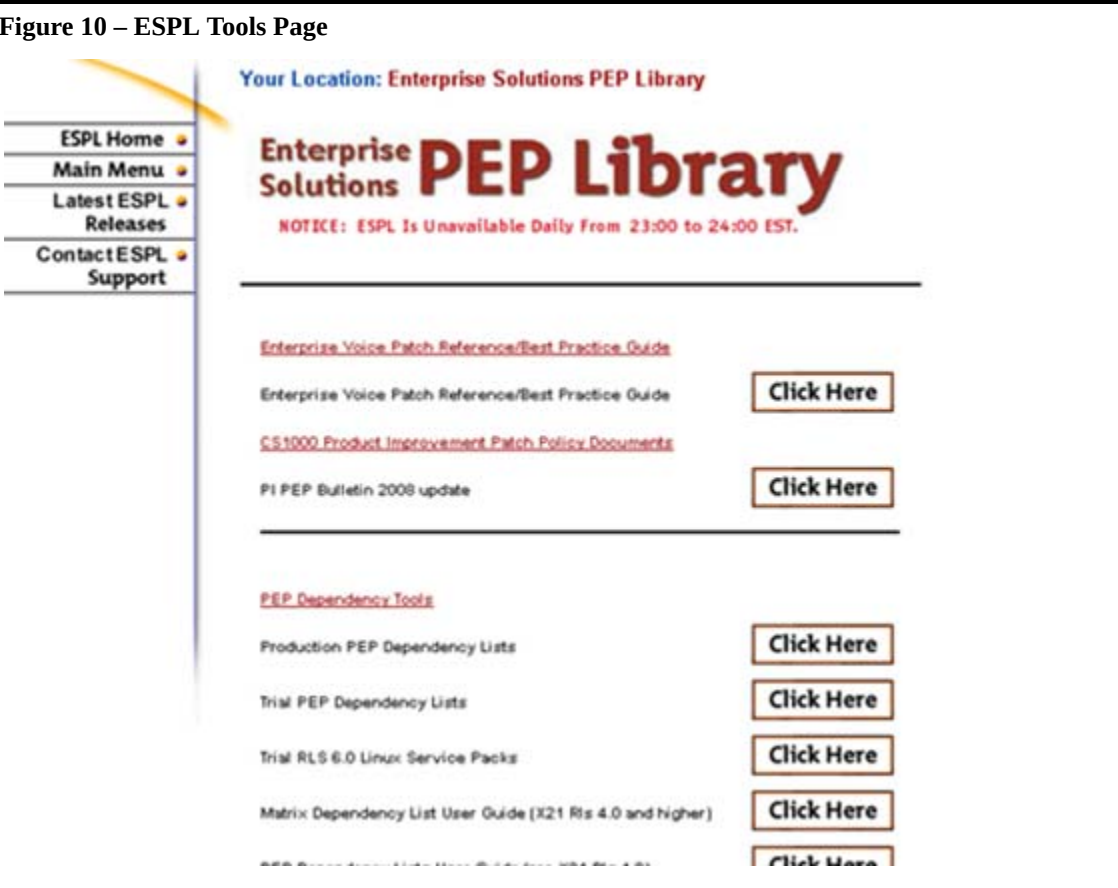
Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 2 of 12)

Step	Action	Observation
Figure 8 – ESPL Patch Library Logon WEB Page 		
2	Logon using your Username and Password you have been assigned through Registration to this site. If you are not registered for access use the "Register" Link at the top of the page, or have someone that is registered perform this procedure. Enter, "Your Username" TAB to Password Enter, "Your Password" Select, Log In button.	ESPL Home Page is displayed.

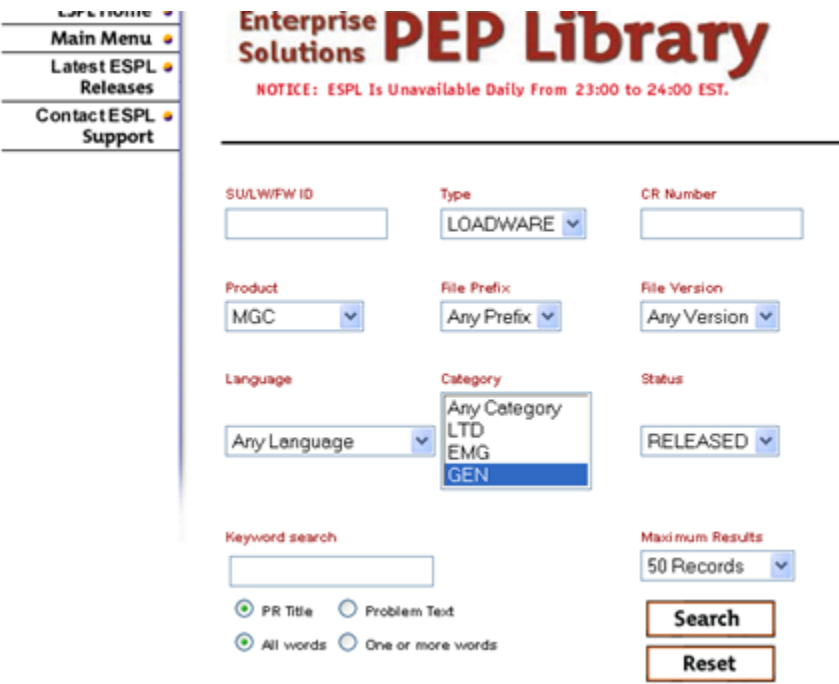
Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 3 of 12)

Step	Action	Observation
Figure 9 – ESPL Home Page		
		
3	Select, "Click Here" button to enter site.	ESPL Main Menu is displayed.

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 4 of 12)

Step	Action	Observation
Figure 10 – ESPL Tools Page 		
4	Scroll to "Serviceability Updates and Loadware/Firmware Distribution Tools (CS1000)" and Find, "SU/LW/FW File Search" and Select, "Click Here"	

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 5 of 12)

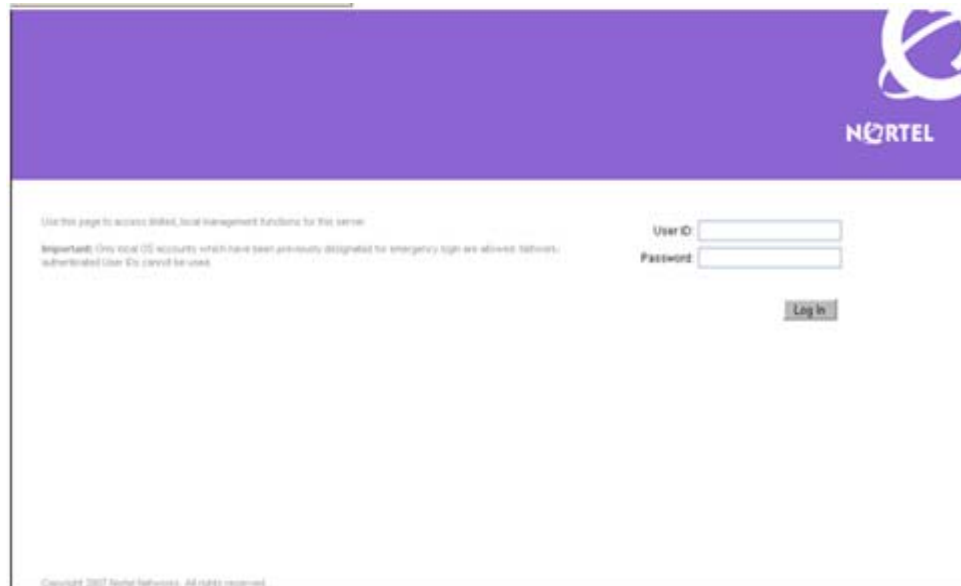
Step	Action	Observation
	Figure 11 – MGC Loadware Search 	
5	Enter, search criteria to find updated MGC Loadware files. Type = Loadware Product = MGC Category = GEN Status = Released Select, Search button run the query.	

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 6 of 12)

Step	Action	Observation																														
Figure 12 – MGC Loadware Results Enterprise Solutions PEP Library NOTICE: ESPL Is Unavailable Daily From 23:00 to 24:00 EST. <table><thead><tr><th>FILE ID</th><th>Type</th><th>File Version</th><th>Status</th><th>Category</th><th>Product</th></tr></thead><tbody><tr><td>DSP1AA10</td><td>LOADWARE</td><td>AA10</td><td>RELEASED</td><td>GEN</td><td>MGC</td></tr><tr><td>Title</td><td colspan="5">DSP1AA10: MR 12 Mindspeed loadware for DSP High density daughter board.</td></tr><tr><td>DSP2AA12</td><td>LOADWARE</td><td>AA12</td><td>RELEASED</td><td>GEN</td><td>MGC</td></tr><tr><td>Title</td><td colspan="5">DSP2AA12: MR 12 Mindspeed loadware for DSP low density DB</td></tr></tbody></table>			FILE ID	Type	File Version	Status	Category	Product	DSP1AA10	LOADWARE	AA10	RELEASED	GEN	MGC	Title	DSP1AA10: MR 12 Mindspeed loadware for DSP High density daughter board.					DSP2AA12	LOADWARE	AA12	RELEASED	GEN	MGC	Title	DSP2AA12: MR 12 Mindspeed loadware for DSP low density DB				
FILE ID	Type	File Version	Status	Category	Product																											
DSP1AA10	LOADWARE	AA10	RELEASED	GEN	MGC																											
Title	DSP1AA10: MR 12 Mindspeed loadware for DSP High density daughter board.																															
DSP2AA12	LOADWARE	AA12	RELEASED	GEN	MGC																											
Title	DSP2AA12: MR 12 Mindspeed loadware for DSP low density DB																															
6	MGC Loadware files are displayed. Select, "File ID" link for the loadware files to view and download the latest version of each file type. Download the files using the link provided at the bottom of the Loadware Details screen. Save, Loadware files to MGC_Loadware Folder on your PC Desktop. After downloading the latest MGC Loadware files, Exit, by closing your Browser.																															

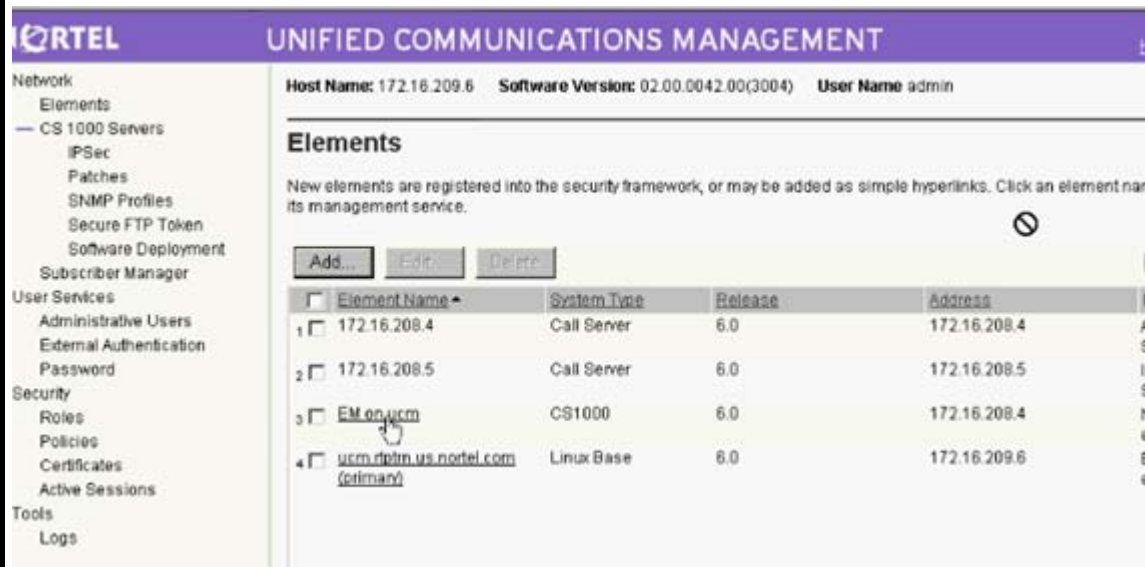
Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 7 of 12)

Step	Action	Observation
7	Using the Windows Internet Explorer Browser on your PC Enter the FQDN (Fully Qualified Domain Name) of the UCM Primary Security Server. (Example: http://<UCMpri.rtplab.Avaya.com and press <Enter> to continue. Note: FQDN or IP can be used. FQDN and IP must be defined on customer DNS server or in individual HOSTS tables on systems trying to access this System Element via FQDN. TLAN IP address can be used but does not provide Single Sign-on functionality, meaning you will be offered another sign-on when selecting access to other servers from UCM.	
8	Security Alert screen displayed. Select, Yes to proceed with logon.	UCM (Unified Communications Manager) logon screen is displayed.

Figure 13 – UCM (Unified Communications Manager) Logon screen

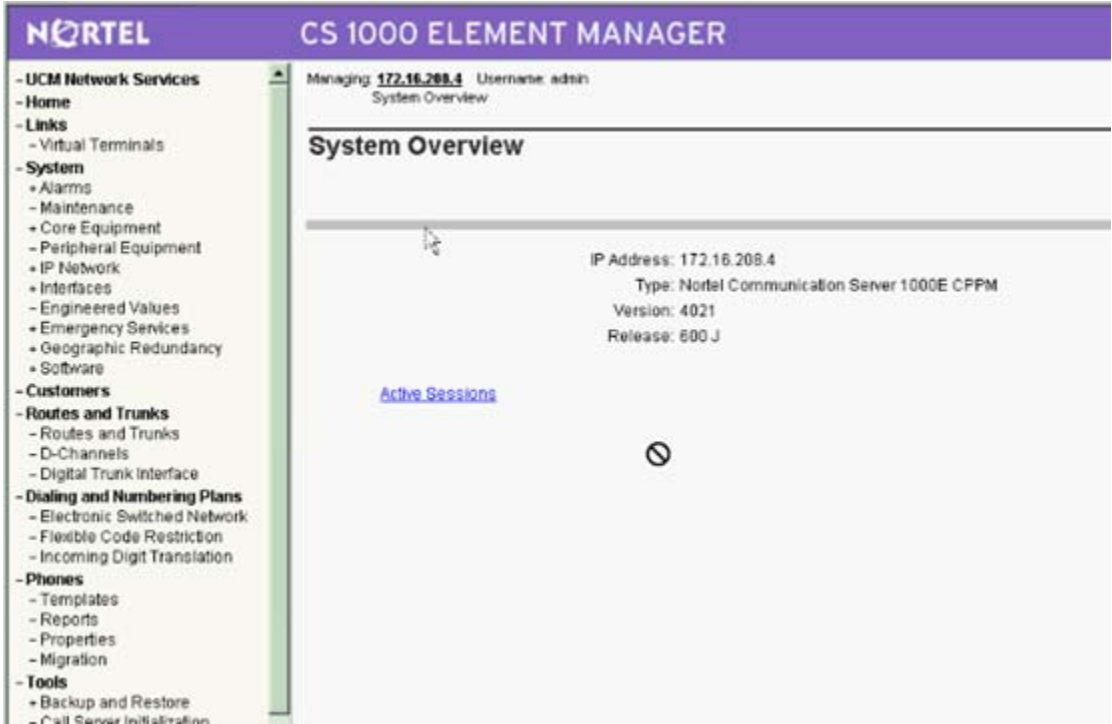
Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 8 of 12)

Step	Action	Observation
9	Logon using the User ID admin and the Password you assigned during the UCM Security configuration. Refer to Site Spec. Book for this data.	UCM Elements screen is displayed.

Figure 14 – UCM System Elements

10	Access the Element Manager application. Select, <EM_link> for the Call Server and Node you will be configuring. Note: EM link will show EM plus the Hostname of the server where EM application is loaded. (example: EM_on_UCM)	
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Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 9 of 12)

Step	Action	Observation
Figure 15 – CS1000 Element Manager 		
11	Select, "System> Software> Loadware PEPs" to open the Loadware PEP Tool.	

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 10 of 12)

Step	Action	Observation
Figure 3 – Loadware PEP Tool		
12	Select, "Current Loadware Version" button to get a current listing of Loadware and Version Numbers installed on the Call Server.	

Figure 16 – Current Loadware Listing

- UCM Network Services - Home - Links - Virtual Terminals - System + Alarms - Maintenance + Core Equipment - Peripheral Equipment + IP Network + Interfaces - Engineered Values + Emergency Services + Geographic Redundancy - Software - Call Server PEPs - Loadware PEPs - File Upload - IP Phone Firmware - Voice Gateway Media Card - Media Cards PEPs - Customers - Routes and Trunks - Routes and Trunks - D-Channels - Digital Trunk Interface - Dialing and Numbering Plans - Electronic Switched Network - Flexible Code Restriction	- MALAYSIA Interface Datafile (MSIA) AA04 - CHINA Interface Datafile (CHNA) AA04 - INDIA Interface Datafile (INDI) AA03 - PHILIPPINES Interface Datafile (PHILP) AA02 - TAIWAN Interface Datafile (TAMW) AA03 - ETSI Australia Interface Datafile (EAUS) AA02 - QSIG GF Interface Datafile (EGF4) AC14 - T1E1 DCH Application (DCH3) AA10 - T1E1 PRI Application (PUP3) AA14 - T1E1 Card Base Loadware (T1E1) AA19 - DITI Application (DITI) AA40 - Clock Controller Card (CLKC) AA19 - TAURUS 3902 Flash (3902) AA84 - TAURUS 3903 Flash (3903) AA90 - TAURUS 3904 Flash (3904) AA93 - TAURUS 3905 Flash (3905) AA93 <table> <thead> <tr> <th>Media Gateway Controller Loadware</th><th>Version Number</th></tr> </thead> <tbody> <tr> <td>Control and Signaling Processor (CSP)</td><td>AL61</td></tr> <tr> <td>Media Stream Processor (MSP)</td><td>AB01</td></tr> <tr> <td>Application (APP)</td><td>AA06</td></tr> <tr> <td>Field-Programmable Gate Array (FPGA)</td><td>AA15</td></tr> <tr> <td>Boot (BOOT)</td><td>AL60</td></tr> <tr> <td>Low Density DSP Daughterboard (DSP1)</td><td>AB01</td></tr> <tr> <td>High Density DSP Daughterboard (DSP2)</td><td>AB01</td></tr> </tbody> </table>	Media Gateway Controller Loadware	Version Number	Control and Signaling Processor (CSP)	AL61	Media Stream Processor (MSP)	AB01	Application (APP)	AA06	Field-Programmable Gate Array (FPGA)	AA15	Boot (BOOT)	AL60	Low Density DSP Daughterboard (DSP1)	AB01	High Density DSP Daughterboard (DSP2)	AB01
Media Gateway Controller Loadware	Version Number																
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Boot (BOOT)	AL60																
Low Density DSP Daughterboard (DSP1)	AB01																
High Density DSP Daughterboard (DSP2)	AB01																

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 11 of 12)

Step	Action	Observation
13	Compare, "MGC Loadware File Versions" with the downloaded version in the MGC_Loadware folder on your PC Desktop.	
14	Determine which MGC loadware files need to be updated. Select, "System> Software> Loadware PEPs" return to the Loadware PEP Tool.	

Figure 4 – Loadware PEP Tool**Loadware PEPs**

Base loadware version: 101 Current Loadware Version

Loadware PEP Setting	Bin (Total: 0; Limit: 10)	Action
Loadware File Name Browse...		-->> <<--
		Load and Activate

Select Command	Select a command option	PEP ID	Action
LWSTAT	Call Server Only		Submit
			Centralized Software Upgrade

Base loadware version: 101
System has no loadware patches installed.

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15	Select, Browse button to open a window to select MGC Loadware file from the MGC_Loadware folder on your PC Desktop. Select, Loadware File, and Open to populate the "Browse" window. Select, "-->>" button to push the loadware file to the "Load and Activate" window. Repeat the above steps to select all of the MGC loadware files needing to be updated. Note: Up to 10 Loadware files can be Loaded at a time.	
----	--	--

Procedure 4 – (MGC/MG XPEC Loadware) Acquire and Upgrade Loadware (Page 12 of 12)

Step	Action	Observation
16	Select, " Load and Activate " to Load the new MGC Loadware files to the Call Server.	

Figure 17 – MGC Loadware Upgrade

17	Select, LWINST from the "Select Command" window. Select, "Call Server and all IPMGs Sequentially" from the "Select a command option" window".	
----	---	--

**Caution:**

Upgrade of the MGC/MG XPEC cards will interrupt service. Cards will reboot after new loadware is installed.

18	Select, "Centralized Software Upgrade" button to install the MGC loadware updates. The MGC cards will be rebooted when loadware is activated. Note: There is also an option to Upgrade all IPMGs Simultaneously instead of Sequentially.	Status and Results will be displayed in the Results window at the bottom of the screen.
----	---	---

End of Procedure

4.0.5 Initial Call Server MG XPEC Setup and Configuration

MG XPEC is a dual controller creating 2 IPMG's from a single IPE UEM shelf. The MG XPEC card functions as two independent controllers and each controller will need to be setup to communicate with the host CS1000E Rls. 6.0 system.

Perform this procedure to verify CS1000E Rls. 6.0 Call Server has been configured for the new IPMG super loops being provided by the newly installed MG XPEC controller. Manually configure the MG XPEC IP address and CS1000E Call Server IP to link with.

After the initial IP configuration has been completed the MG XPEC will acquire updated firmware from the CS1000E host system. This process will take approximately 20 minutes for each MG XPEC controller.

Pre-requisites:

1. IPE UEM has been converted a IPMG (IP Media Gateway) with the MG XPEC conversion kit.
2. UEM IPMG ELAN and TLAN ports have been connected to the customer's network.
3. Windows PC with serial communications port and terminal software available to configure the MG XPEC controller.
4. Telnet/SSH communications software on your Windows PC. Use a commercial communications package or Free-ware such as PuTTY© to make this connection. (Note: Putty© can be acquired from: (<http://www.chiark.greenend.org.uk/~sgtatham/putty/>)
5. Data Network access is available for the installer to access the CS1000E Rls. 6.0 host system. (Call Server, UCM Security Server and Element Manager.)
6. CS1000E Rls 6.0 User ID and Passwords are available for the installer to access the Call Server, UCM (Universal Communications Manager) and EM (Element Manager).
7. MG1010/MG XPEC RJ-45 to DB9 serial cable (N0211605) is available to configure the MG XPEC controllers.
8. MB Settings for CS1000E super loop configuration:
MG XPEC MB super loop and shelf,
MB IP address
MB Zone to be assigned
9. DB Settings for CS1000E super loop configuration:
MG XPEC DB super loop and shelf,

DB IP address
DB Zone to be assigned

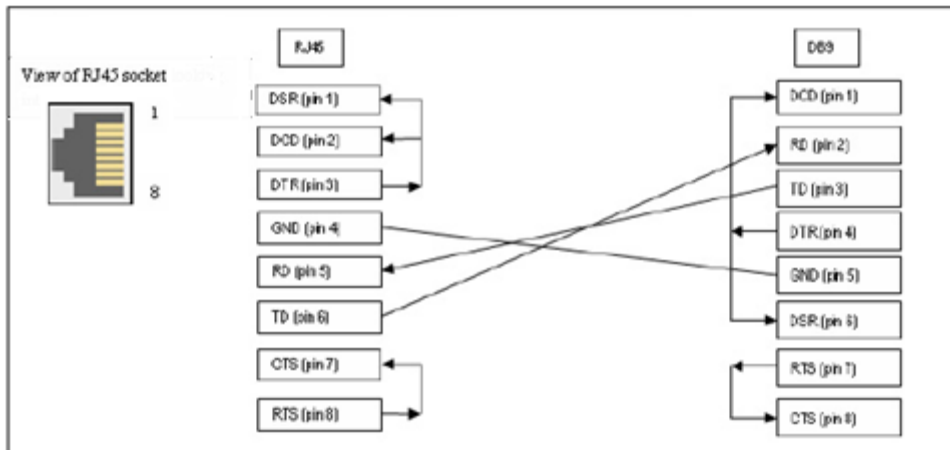
10. MB Settings for MG XPEC manual configuration:

MB ELAN IP address
MB ELAN Subnet mask
MB ELAN Gateway
Call Server IP address

11. DB Settings for MG XPEC manual configuration:

DB ELAN IP address
DB ELAN Subnet mask
DB ELAN Gateway
Call Server IP address

Figure 18 – MG1010/MG XPEC RJ-45 to DB9 serial cable (N0211605) pin out



Procedure 5 – Initial Call Server MG XPEC Setup and Configuration																										
Step	Action	Observation																								
1	Validate/Update configuration changes on the host CS1000E system. To do this you will need Telnet/SSH client software to access the CS1000E system. Use a commercial communications package or Freeware such as PuTTY© to make this connection. (Note: Putty© can be acquired from: (http://www.chiark.greenend.org.uk/~sgtatham/putty/) Connect your Windows PC to the customer’s IP network. Using a Telnet/SSH compliant software, connect to the CS1000E system by entering the ELAN IP of the CS1000E Rls. 6.0 Call Server.																									
2	login as: logon using User ID and Password supplied by the customer or CS1000E installer.	(Example below) login as: admin SSH server: User Authentication Using keyboard-interactive authentication. admin, welcome to Nortel CS1K Call Server Password: TTY #06 LOGGED IN admin 13:24 26/10/2009																								
3	Check the status of configured IPMG’s. LD 117 <Enter> OAM000 => stat ipmg <Enter>	(Example below) <table><tr><td></td><td></td><td>LAST REG</td><td>LAST REG</td></tr><tr><td>IPMG</td><td>TYPE</td><td>STATUS</td><td>DATE</td></tr><tr><td>004 0</td><td>MGC</td><td>REG</td><td>27/10/2009</td></tr><tr><td>008 0</td><td>MGX</td><td>REG</td><td>27/10/2009</td></tr><tr><td>016 0</td><td>MGX</td><td>CONF/UNREG</td><td>NONE</td></tr><tr><td>016 1</td><td>MGX</td><td>CONF/UNREG</td><td>NONE</td></tr></table>			LAST REG	LAST REG	IPMG	TYPE	STATUS	DATE	004 0	MGC	REG	27/10/2009	008 0	MGX	REG	27/10/2009	016 0	MGX	CONF/UNREG	NONE	016 1	MGX	CONF/UNREG	NONE
		LAST REG	LAST REG																							
IPMG	TYPE	STATUS	DATE																							
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008 0	MGX	REG	27/10/2009																							
016 0	MGX	CONF/UNREG	NONE																							
016 1	MGX	CONF/UNREG	NONE																							

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
4	Verify the super loops being configured on the MG XPEC cards show as IPMG Type = MGX. IPMG super loop and shelf needs to be configured for both the MB half of the MG XPEC and the DB half.	
5	Verify and update IPMG assignments as needed. Exit OAM overlay. => **** <Enter> Verify/Update IPMG super loop, type and IP address assigned. LD 97 <Enter> SCSYS000 REQ prt <Enter> TYPE supl <Enter> SUPL <Enter>	(Example below) <pre> SUPL SUPT SHLF ZONE0/1 IPR0/1 004 IPMG 0 001 10.104.3.166 1 --- ----- 008 IPMG 0 001 10.104.3.200 1 --- ----- 016 IPMG 0 001 10.104.3.201 1 001 10.104.3.202 </pre>

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
6	(Perform this step if IPMG type needs to be changed to MGX or if IP address needs to be changed/updated for MG XPEC IPMG's being activated. This step also used to configure new IPMG's not yet configured on the CS1000E Call Server. Ensure you add the settings required for the new MG XPEC MB (Mother Board) and DB (Daughter Board) Media Gateways being added.) REQ chg <Enter> TYPE supl <Enter> SUPL (enter super loop #) <Enter> "MB super loop" SLOT <Enter> SUPT ipmg <Enter> IPR0 (If new/chg input IP of "0" shelf) <Enter> "MB IP address" IPMG_TYP0 mgx <Enter> ZONE0 (if new.chg input zone #) <Enter> DES0 <Enter> -1E <Enter> -E <Enter> -2T <Enter> -T <Enter> IPR1 (If new/chg input IP of "1" shelf) <Enter> "DB shelf 1 IP address" IPMG_TYP1 mgx <Enter> ZONE1 (of new/chg input zone #) <Enter> DES1 <Enter> -1E <Enter> -E <Enter> -2T <Enter> -T <Enter>	

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
7	Data dump changes to the CS1000E Call Server. Input, **** <Enter> exit configuration change overlay. LD 43 <Enter> EDD000 edd <Enter>	Data Dump Complete Status displayed for CCBR and Removable Media for backups.
8	Exit data dump overlay and log off CS1000E Call Server. Input, **** <Enter> OVL000 > logo <Enter> Close your Telnet/SSH connection to the CS1000E Call Server. Disconnect or close session window.	
9	Connect the serial port of your Windows PC to "TTY 0" port on the "back right" I/O panel of the UEM shelf. This is the MB (Mother Board) half of the MG XPEC. You will need to use N0211605 cable to make this connection. Launch you terminal emulation software to communicate with the MG XPEC card. Note: Terminal settings: Type = PC ANSI/VT100 Baud = 9600 Bits = 8 Parity = None Stop Bit = 1 Flow Ctrl= None	

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
10	Press the "Reset" button on the faceplate MB side of the MG XPEC card.	VxWorks boot messages will be seen on you PC terminal. Card will initially boot from Gold Image. Elan Gateway IP address is not configured. Failed to read Elan IP address information from bootline. Tlan IP address is not configured. Failed to read Tlan subnet mask information from bootline. Call Server IP address information is missing in NVRAM. csIpGet:431:Primary Call server IP address is not configured. ELAN IP : 0.0.0.0
11	Enter the IP configuration as you are prompted. ELAN IP: 0.0.0.0 Input, (ELAN IP) <Enter> ELAN SUB NET MASK: 0.0.0.0 Input, (Net Mask) <Enter> ELAN GATEWAY IP: Input, (Elan Gateway IP) <Enter> Primary CS IP: Input, (Primary Call Server IP) <Enter>	Change MGC advanced parameters? Y/N (N)
12	Input, n <Enter> to continue without changes to advanced parameters.	Elan security Disabled, change? Y/N (N)

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
13	Input, n <Enter> to continue without changes to security settings.	You have entered the following parameters for this MG 1000E: ELAN IP : 10.104.3.200 ELAN subnet mask : 255.255.255.128 ELAN gateway IP : 10.104.3.129 Primary CS IP : 10.104.3.164 TLAN set to auto negotiate. ELAN set to auto negotiate. ELAN security Disabled Is this correct? (y/n/[a]bort) :
14	Input, y <Enter> to accept the current inputs and continue. (Note: If changes need to be made answer "n <Enter>" and you will be prompted for these parameters again.)	The above changes require reboot to take effect. Do you want to reboot now? (y/n/[a]bort) :
15	Input, y <Enter> to confirm reboot now.	Rebooting... VxWorks System Boot Copyright 1984-2005 Wind River Systems, Inc. CPU: Chagall Version: VxWorks5.5.1 Bootcode version: MGCBZM04 Creation date: Jun 22 2009, 22:11:47 5 4 3 2 1 0 auto-booting...

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
16	MG XPEC MB controller will reboot and communicate with the CS1000E RIs 6.0 Call Server. If commit option is enabled the Call Server will upgrade the loadware on the new MG XPEC MB controller. This will take approximately 20 minutes to complete, it will boot again to implement the loadware. While this is going on disconnect your PC terminal from MB "TTY 0" port and connect it to DB "TTY 0" port on the "left rear" of the UEM shelf.	
17	Press the "Reset" button on the faceplate DB side of the MG XPEC card.	VxWorks boot messages will be seen on you PC terminal. Card will initially boot from Gold Image. Elan Gateway IP address is not configured. Failed to read Elan IP address information from bootline. Tlan IP address is not configured. Failed to read Tlan subnet mask information from bootline. Call Server IP address information is missing in NVRAM. csIpGet:431:Primary Call server IP address is not configured. ELAN IP : 0.0.0.0

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
18	Enter the IP configuration as you are prompted. ELAN IP: 0.0.0.0 Input, (ELAN IP) <Enter> ELAN SUB NET MASK: 0.0.0.0 Input, (Net Mask) <Enter> ELAN GATEWAY IP: Input, (Elan Gateway IP) <Enter> Primary CS IP: Input, (Primary Call Server IP) <Enter>	Change MGC advanced parameters? Y/N (N)
19	Input, n <Enter> to continue without changes to advanced parameters.	Elan security Disabled, change? Y/N (N)
20	Input, n <Enter> to continue without changes to security settings.	You have entered the following parameters for this MG 1000E: ELAN IP : 10.104.3.201 ELAN subnet mask : 255.255.255.128 ELAN gateway IP : 10.104.3.129 Primary CS IP : 10.104.3.164 TLAN set to auto negotiate. ELAN set to auto negotiate. ELAN security Disabled Is this correct? (y/n/[a]bort) :
21	Input, y <Enter> to accept the current inputs and continue. (Note: If changes need to be made answer "n <Enter>" and you will be prompted for these parameters again.)	The above changes require reboot to take effect. Do you want to reboot now? (y/n/[a]bort) :

Procedure 5 – Initial Call Server MG XPEC Setup and Configuration		
Step	Action	Observation
22	Input, y <Enter> to confirm reboot now.	Rebooting... VxWorks System Boot Copyright 1984-2005 Wind River Systems, Inc. CPU: Chagall Version: VxWorks5.5.1 Bootcode version: MGCBZM04 Creation date: Jun 22 2009, 22:11:47 5 4 3 2 1 0 auto-booting...
23	MG XPEC DB controller will reboot and communicate with the CS1000E RIs 6.0 Call Server. If commit option is enabled the Call Server will upgrade the loadware on the new MG XPEC DB controller. This will take approximately 20 minutes to complete, it will boot again to implement the loadware. While the MG XPEC is being upgraded, disconnect your PC terminal from DB "TTY 0" port on the I/O panel.	
24	Replace the back cover on the IPE UEM shelf.	
End of Procedure		

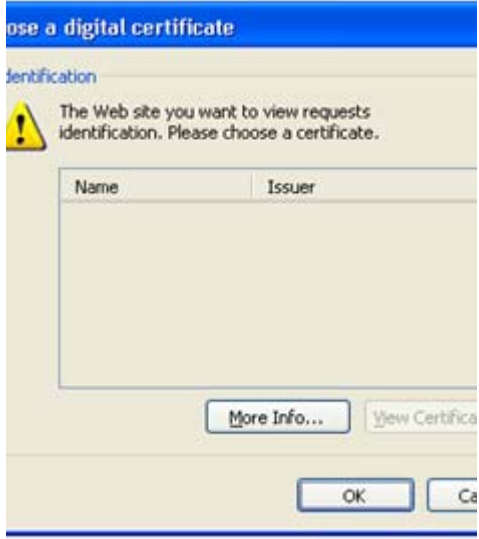
4.0.6 MG XPEC Configuration of Resources in Element Manager

EM (Element Manager) is used to complete the configuration of MG XPEC and assign the resources to the CS1000E Call Server.

This procedure is used to configure DSP (Digital Signal Processors), TDS (Tone and Digit Senders), Conference resources and DTR (Digitone Receiver) on the media gateway for the CS1000E Call Server.

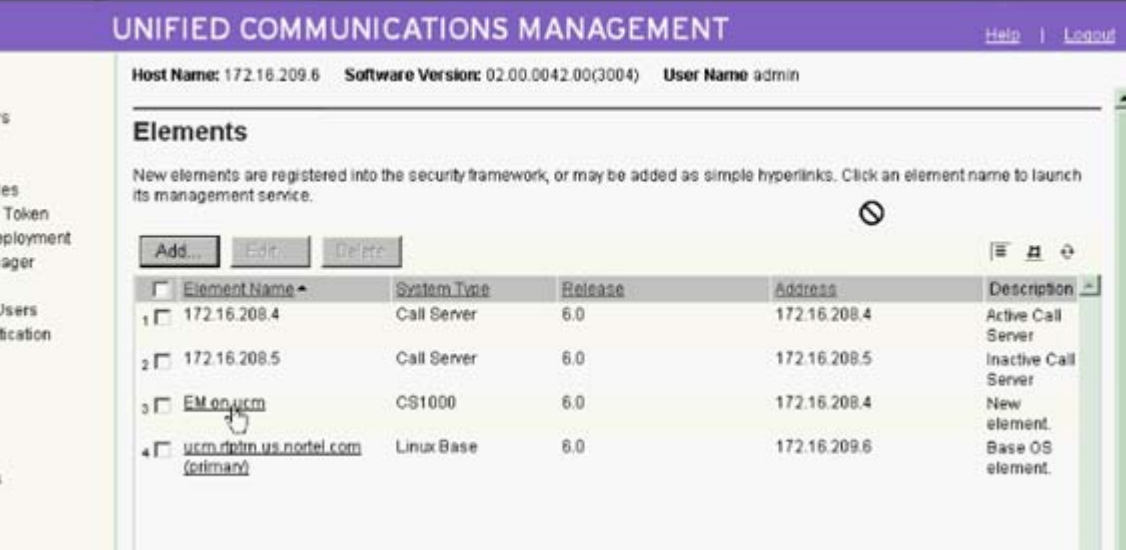
Pre-requisites:

1. Windows PC connected to the TLAN where the UCM server has been installed.
2. UCM Fully Qualified Domain Name FQDN assigned during installation.
3. UCM "admin" password assigned during UCM configuration.
4. ELAN and TLAN IP address assignments for the MG XPEC card and the IP address assignments for the DSP daughter boards to be configured on the MG XPEC card.
5. Call Serve Customer and Zone number to be assigned on the DSP resources.
6. MGTDS and MGCONF loop numbers to be used when configuring the TDS and Conference functions on the new MG XPEC controllers.
7. DTR TN assignments for MB and DB sections of the MG XPEC being configured. Each Media Gateway with analog sets or trunks should have DTR's assigned. Cards 14 and 15 are typically assigned for this function.

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 1 of 13)		
Step	Action	Observation
1	Using the Windows Internet Explorer Browser on your PC Enter the FQDN (Fully Qualified Domain Name) of the UCM Primary Security Server. (Example: http://<UCMpri.rtplab.Avaya.com and press <Enter> to continue. Note: FQDN or IP can be used. FQDN and IP must be defined on customer DNS server or in individual HOSTS tables on systems trying to access this System Element via FQDN. TLAN IP address can be used but does not provide Single Sign-on functionality, meaning you will be offered another sign-on when selecting access to other servers from UCM.	
2	Digital certificate warning box displayed. Select, OK button to continue.	
3	Security Alert screen displayed. Select, Yes to proceed with logon.	UCM (Unified Communications Manager) logon screen is displayed.

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 2 of 13)

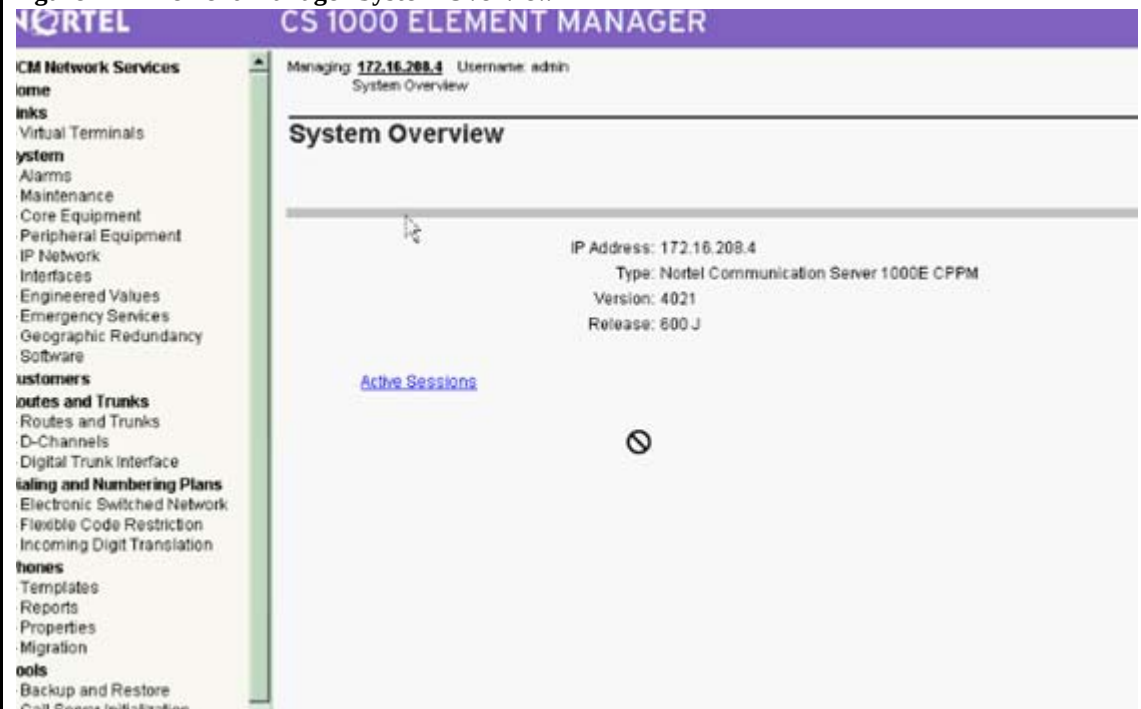
Step	Action	Observation
Figure 19 – UCM (Unified Communications Manager) Logon screen 		
4	Logon using the User ID admin and the Password you assigned during the UCM Security configuration. Refer to Site Spec. Book for this data.	UCM Elements screen is displayed.

Figure 20 – UCM System Elements


Element Name	System Type	Release	Address	Description
1 172.16.208.4	Call Server	6.0	172.16.208.4	Active Call Server
2 172.16.208.5	Call Server	6.0	172.16.208.5	Inactive Call Server
3 EM on ucm	CS1000	6.0	172.16.208.4	New element.
4 ucm.rtpm.us.nortel.com (primary)	Linux Base	6.0	172.16.209.6	Base OS element.

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 3 of 13)

Step	Action	Observation
5	Access the Element Manager application. Select, <EM_link> for the Call Server and Node you will be configuring. Note: EM link will show EM plus the Hostname of the server where EM application is loaded. (example: EM_on_UCM)	

Figure 21 – Element Manager System Overview

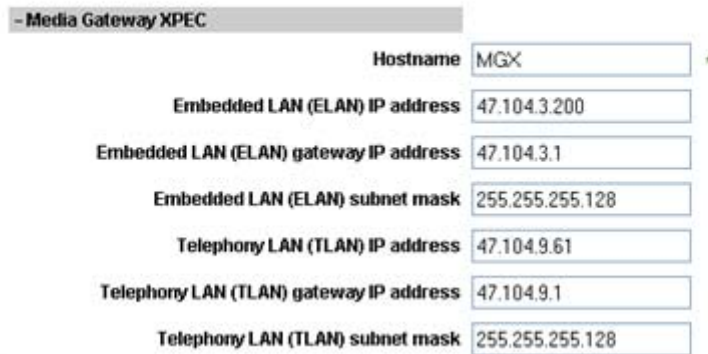
6	Select, "System> IP Network> Media Gateways" from the Navigation Tree to open MGC configuration screens.	
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Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 4 of 13)

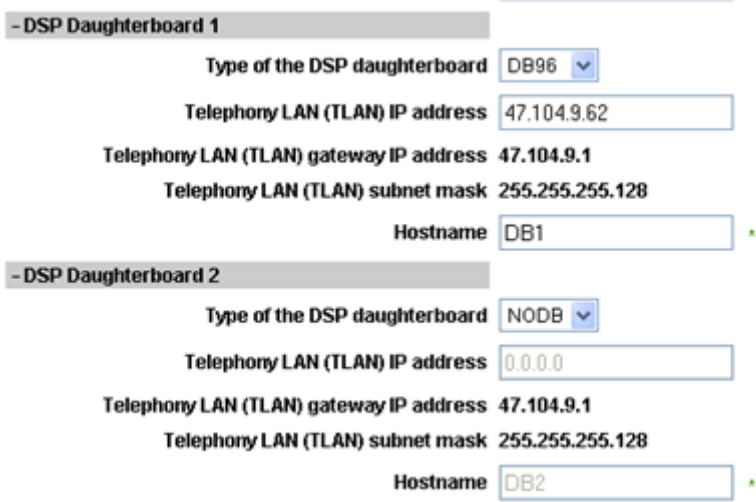
Step	Action	Observation																				
Figure 22 – Media Gateway Management Screen (Example Only)																						
Id... Digital Trunking... Reboot Delete Virtual Terminal More Actions <table><thead><tr><th>IPMG</th><th>IP Address</th><th>Zone</th><th>Type</th></tr></thead><tbody><tr><td>004 00</td><td>47.104.3.166</td><td>001</td><td>MGC</td></tr><tr><td>008 00</td><td>47.104.3.200</td><td>001</td><td>MGX</td></tr><tr><td>016 00</td><td>10.104.3.201</td><td>001</td><td>MGX</td></tr><tr><td>016 01</td><td>10.104.3.202</td><td>001</td><td>MGX</td></tr></tbody></table>			IPMG	IP Address	Zone	Type	004 00	47.104.3.166	001	MGC	008 00	47.104.3.200	001	MGX	016 00	10.104.3.201	001	MGX	016 01	10.104.3.202	001	MGX
IPMG	IP Address	Zone	Type																			
004 00	47.104.3.166	001	MGC																			
008 00	47.104.3.200	001	MGX																			
016 00	10.104.3.201	001	MGX																			
016 01	10.104.3.202	001	MGX																			
7	Select, one of the Super Loop Links in the IPMG Column for the newly installed MG XPEC. MG XPEC controllers will be listed as Type = MGX. Start by configuring the MB (Mother Board) half of the MG XPEC first. (If MG XPEC is not displayed Select Add button to define IPMG controller properties.) (Note: Initial Super Loops will be 000, 004 and 008)	MGC properties screen is displayed.																				

Figure 23 – Media Gateway Properties Screen for MG XPEC

Input Description	Input Value
ELAN IP address:	47.104.3.200 *
Bandwidth zone number:	1 Range: 0 - 255
IPMG type:	MGX
Faceplate ELAN port:	1E
Backplane ELAN connection:	E
Faceplate TLAN port:	2T
Backplane TLAN connection:	T

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 5 of 13)		
Step	Action	Observation
8	Verify the ELAN IP address and Zone assigned for this MG XPEC (MGX) card. Correct if needed. Note: Refer to Site Spec. Book for this data.	
9	Select, "Next button" to continue with MG XPEC (MGX) configuration.	
Figure 24 – Media Gateway Controller Configuration (Example Only)  The screenshot shows a configuration window titled "- Media Gateway XPEC". It contains several input fields with the following values: Hostname: MGX, Embedded LAN (ELAN) IP address: 47.104.3.200, Embedded LAN (ELAN) gateway IP address: 47.104.3.1, Embedded LAN (ELAN) subnet mask: 255.255.255.128, Telephony LAN (TLAN) IP address: 47.104.9.61, Telephony LAN (TLAN) gateway IP address: 47.104.9.1, and Telephony LAN (TLAN) subnet mask: 255.255.255.128.		
10	(Note: Initial Super Loops will be 000, 004 and 008) Update, MG XPEC configuration with Hostname:_____ (ex. MGX) ELAN gateway IP:_____ ELAN subnet mask:_____ TLAN IP:_____ TLAN gateway IP:_____ TLAN subnet mask:_____ Note: Refer to Site Spec. Book for this data.	
11	Scroll down to DSP daughter board configuration.	

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 6 of 13)

Step	Action	Observation
Figure 25 – DSP Daughter Board Configuration 		
12	Select, DB96 for the first daughter board. Enter, TLAN IP address assigned to this board. Enter, Hostname: (ex: DB1_000_0 to ID loop and shelf) Select, DB96 for board 2. Enter, TLAN IP address assigned to board 2. Enter, Hostname: (ex: DB2_000_0 to ID loop and shelf) Note: Refer to Site Spec. Book for this data.	
13	The other parameters should not need to be changed. Scroll to the bottom of the screen and Select, "Save button". Warning Display, Stating MGC/MGX will be rebooted for changes to take affect. Select, OK to continue.	Media Gateway Management Screen is Displayed.
14	Select, the radio button for the super loop and shelf you have just configured. Select, "VGW Channels" from the "More Actions" window to configure dsp channels.	

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 7 of 13)

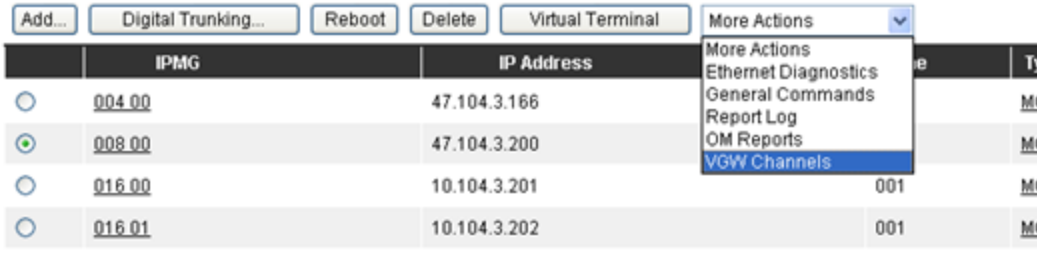
Step	Action	Observation																									
Figure 26 – Media Gateway Management Screen (Example Only) Media Gateways																											
 <table border="1"> <thead> <tr> <th></th> <th>IPMG</th> <th>IP Address</th> <th></th> <th>Type</th> </tr> </thead> <tbody> <tr> <td>☐</td> <td><u>004 00</u></td> <td>47.104.3.166</td> <td></td> <td><u>MGC</u></td> </tr> <tr> <td>☒</td> <td><u>008 00</u></td> <td>47.104.3.200</td> <td></td> <td><u>MGX</u></td> </tr> <tr> <td>☐</td> <td><u>016 00</u></td> <td>10.104.3.201</td> <td>001</td> <td><u>MGX</u></td> </tr> <tr> <td>☐</td> <td><u>016 01</u></td> <td>10.104.3.202</td> <td>001</td> <td><u>MGX</u></td> </tr> </tbody> </table>				IPMG	IP Address		Type	☐	<u>004 00</u>	47.104.3.166		<u>MGC</u>	☒	<u>008 00</u>	47.104.3.200		<u>MGX</u>	☐	<u>016 00</u>	10.104.3.201	001	<u>MGX</u>	☐	<u>016 01</u>	10.104.3.202	001	<u>MGX</u>
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☒	<u>008 00</u>	47.104.3.200		<u>MGX</u>																							
☐	<u>016 00</u>	10.104.3.201	001	<u>MGX</u>																							
☐	<u>016 01</u>	10.104.3.202	001	<u>MGX</u>																							

Figure 27 – VGW Channels Display Screen (Example Only)
VGW Channels - IPMG 008 00

There are no VGW channels configured.

15 **Select, Add button** to configure VGW channels.

Figure 28 – Add VGW channels screen (Example Only)

Number of VGW Channels: 96
 Trunk data block:
 Terminal Number: *
 Designator field for trunk:
 Extended Trunk:
 Customer number: 00 *
 Zone number: Range: 0 - 255 *

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 8 of 13)

Step	Action	Observation
16	Select, 96 channels from the drop down window. Input, starting TN to use. (TN will be Super loop and shelf assigned to this controller. Card and unit will be 8 0. Cards 8, 9 and 10 will be populated, 32 ports each.) Designator field is optional. Select, Customer Number from the drop down window. (example: 00) Input, Zone to be assigned. Select, Save button to configure DSP Channels.	

Figure 29 – VGW Channels Configure (Example Only)

Add... Delete Multi-Delete				
	Terminal No	Description	Customer	
☐	008 0 08 00	IP_TDM	0	001
☐	008 0 08 01	IP_TDM	0	001
☐	008 0 08 02	IP_TDM	0	001
☐	008 0 08 03	IP_TDM	0	001
☐	008 0 08 04	IP_TDM	0	001
☐	008 0 08 05	IP_TDM	0	001

17	Select, Add button to configure the second DSP daughter board on this MG XPEC (MGX).	
----	---	--

Figure 30 – Add VGW Channels (Example Only)**Add VGW channels**

Number of VGW Channels: 96 ▼

Trunk data block: VGW

Terminal Number: 008 0 11 0 *

Designator field for trunk: IP_TDM

Extended Trunk: DB96

Customer number: 00 ▼ *

Zone number: 1 Range: 0 - 255 *

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 9 of 13)

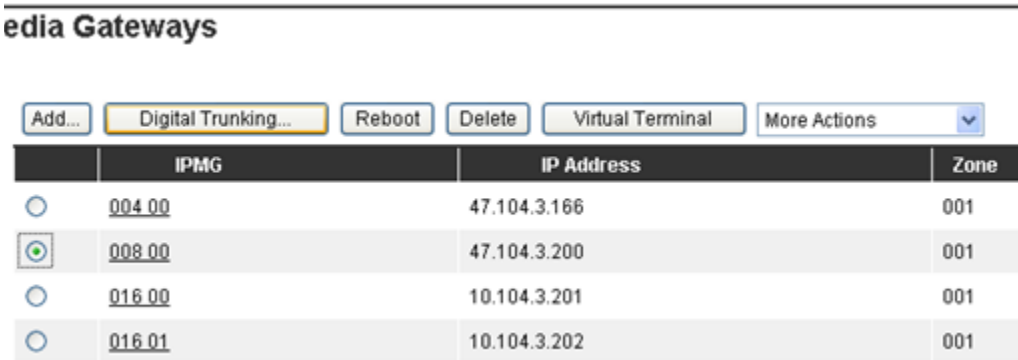
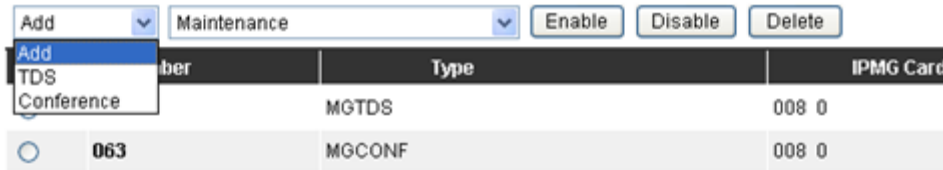
Step	Action	Observation
18	Select, 96 channels from the drop down window. Input, starting TN to use. (TN will be Super loop and shelf assigned to this controller. Card and unit will be 11 0. Cards 11,12 and 13 will be populated, 32 ports each.) Designator field is optional. Select, Customer Number from the drop down window. (example: 00) Input, Zone to be assigned. Select, Save button to configure DSP Channels.	VGW channels are listed for the super loop and shelf being configured.

Figure 31 – VGW Channels Configured (Example Only)

Add... Delete Multi-Delete			
	Terminal No	Description	Customer
☐	008.0.08.00	IP_TDM	0
☐	008.0.08.01	IP_TDM	0
☐	008.0.08.02	IP_TDM	0
☐	008.0.08.03	IP_TDM	0
☐	008.0.08.04	IP_TDM	0
☐	008.0.08.05	IP_TDM	0

19	Add TDS and Conference assignments for each IPMG. Note: Each IPMG should have at least one TDS and one Conference assigned. (example: Loops 100-160 to be used for TDS and Conference) Select, "System> IP Network> Media Gateways" from the Navigation Tree to open MGC configuration screens.	
----	--	--

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 10 of 13)

Step	Action	Observation
Figure 32 – Media Gateway Management Screen 		
20	Select, radio button for loop and shelf to check for TDS and Conference assignments. Select, Digital Trunking button to view assignments to this super loop.	
Figure 33 – IMPG Digital Trunk Assignments 		
21	Add TDS by Selecting TDS from the Pull Down Window. Input the TDS Loop number to be used. Select Save button to add the TDS.	
22	Add Conference by Selecting Conference from the Pull Down Window. Input the Conference Loop number to be used. Select Save button to add the Conference loop.	

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 11 of 13)

Step	Action	Observation												
Figure 34 – TDS and Conference Configured														
Digital Trunking for IPMG 008 00 Add Maintenance Enable Disable Delete <table><tr><th></th><th>Number</th><th>Type</th><th>IPMG Card</th></tr><tr><td>☐</td><td>062</td><td>MGTD S</td><td>008 0</td></tr><tr><td>☐</td><td>063</td><td>MGCONF</td><td>008 0</td></tr></table>				Number	Type	IPMG Card	☐	062	MGTD S	008 0	☐	063	MGCONF	008 0
	Number	Type	IPMG Card											
☐	062	MGTD S	008 0											
☐	063	MGCONF	008 0											
23	Add DTR’s to Media Gateway. Select, Core Equipment>Tone Senders and Detectors from the Navigation Tree on the left.													
Figure 35 – Digitone Senders and Detectors screen														
NORTEL CS 1000 ELEMENT MANAGER – UCM Network Services – Home – Links – Virtual Terminals – System – Alarms – Maintenance – Core Equipment – Loops – Superloops – MSD/MIS P Cards – Conference/TDS/Multifrequen – <u>Tone Senders and Detectors</u> – Peripheral Equipment – IP Network – Nodes: Servers, Media Cards – Maintenance and Reports – Media Gateways Managing: 47.104.3.164 Username: admin System > Core Equipment > Tone Senders and Detectors Tone Senders and Detectors Digitone Receivers A type of DTMF detectors used for analog phones and trunks. Multi Frequency Receivers MFR1 Signaling used in North America. Class Modem Units Signaling used for Extended Class Modem Card. Extended Dial Tone Detectors Used for DTMF and Dial Tone Detection.														
24	Select, Digitone Receivers highlighted text in the middle of the window.													

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 12 of 13)

Step	Action	Observation
Figure 36 – Add Digitone Receivers 		
25	Select, Add button to open a window for adding DTR terminal numbers for the system.	
Figure 37 – Add Digitone Receiver Terminal Numbers 		
26	Enter, DTR terminal numbers separated by comma. Up to 5 TN's can be entered and saved at a time. (Example: 8 0 14 0, 8 0 15 0, 8 1 14 0, 8 1 15 0 This example will assign 8 DTR's per card to the installed Media Gateway. With 4 cards defined this will allocate 32 DTR's to the Media Gateway.) Select, Save button to save and exit DTR assignment.	
27	Go Back to Step 6 of this procedure and perform these steps again for the DB (Daughter Board) half of the MG XPEC being configured.	
28	Select, Logout from the Top Right of the screen to exit Element Manager.	

Procedure 6 – MG XPEC Configuration of Resources in Element Manager (Page 13 of 13)		
Step	Action	Observation
End of Procedure		

4.0.7 Configure MG XPEC XSM and TTY Ports on Call Server and Register new Media Gateways to the UCM Security Domain.

MG XPEC is a dual controller creating 2 IPMG's from a single IPE UEM shelf. The MG XPEC card functions as two independent controllers and each controller will need to be setup to communicate with the host CS1000E Rls. 6.0 system.

Perform this procedure to configure XSM, TTY 0 and TTY 1 ports of the MG XPEC card on the CS1000E host Call Server, and register the new media gateways with the UCM Security Domain.

Pre-requisites:

1. IPE UEM has been converted a IPMG (IP Media Gateway) with the MG XPEC conversion kit.
2. UEM IPMG ELAN and TLAN ports have been connected to the customer's network.
3. Windows PC with serial communications port and terminal software available to configure the MG XPEC controller.
4. Telnet/SSH communications software on your Windows PC. Use a commercial communications package or Free-ware such as PuTTY© to make this connection. (Note: Putty© can be acquired from: (<http://www.chiark.greenend.org.uk/~sgtatham/putty/>)
5. Data Network access is available for the installer to access the CS1000E Rls. 6.0 host system. (Call Server, UCM Security Server and Element Manager.)
6. CS1000E Rls 6.0 User ID and Passwords are available for the installer to access the Call Server, UCM (Universal Communications Manager) and EM (Element Manager).
7. CS1000E ports to be assigned as XSM and TTY ports on the MG XPEC that has been added.
8. UCM IP address, admin UserID and password for security domain registration.

Procedure 7 – Configure MG XPEC XSM and TTY Ports on Call Server and Register new Media Gateways to the UCM Security Domain (Page 1 of 4)		
Step	Action	Observation
1	Setup XSM and TTY ports on the CS1000E Rls. 6.0 system. To do this you will need Telnet/SSH client software to access the CS1000E system. Use a commercial communications package or Freeware such as PuTTY© to make this connection. (Note: Putty© can be acquired from: (http://www.chiark.greenend.org.uk/~sgtatham/putty/) Connect your Windows PC to the customer's IP network. Using a Telnet/SSH compliant software, connect to the CS1000E system by entering the ELAN IP of the CS1000E Rls. 6.0 Call Server.	
2	login as: logon using User ID and Password supplied by the customer or CS1000E installer.	(Example below) login as: admin SSH server: User Authentication Using keyboard-interactive authentication. admin, welcome to Nortel CS1K Call Server Password: TTY #06 LOGGED IN admin 13:24 26/10/2009
3	Print Call Server TTY port assignments. Input, ld 22 <Enter> REQ prt <Enter> TYPE adan <Enter> Take note of the TTY and DNUM ports already assigned. Ports 0 thru 15 can be assigned for MG XPEC TTY ports as needed.	

Procedure 7 – Configure MG XPEC XSM and TTY Ports on Call Server and Register new Media Gateways to the UCM Security Domain (Page 2 of 4)		
Step	Action	Observation
4	(Perform this Step to add XSM port if required. Otherwise skip to next step.) Input, **** <Enter> to exit overlay. > ld 17 <Enter> REQ chg <Enter> TYPE adan <Enter> ADAN chg tty xx <Enter> xx = new XSM port CTYP XSM <Enter> IPMG sl s <Enter> sl = super loop, s = shelf DNUM xx <Enter> xx = device number DES XSM <Enter>	MEM AVAIL: (U/P): 94556775 USED U P: 9063402 32172 TOT: 103652349 DISK SPACE NEEDED: 32 KBYTES.....
5	(Perform this Step to add MG XPEC TTY ports to CS1000E) Input, **** <Enter> to exit overlay. > ld 17 <Enter> REQ chg <Enter> TYPE adan <Enter> ADAN chg tty xx <Enter> xx = new XSM port CTYP MGX <Enter> IPMG sl s <Enter> sl = super loop, s = shelf PORT x <Enter> x =tty port 0 or 1 on MGXPEC DES xxx <Enter> xxx = designator BPS <Enter> BITL <Enter> STOP <Enter> PARY <Enter> FLOW <Enter> USER xxx xxx <Enter> xxx = mtc, sch, bug, trf, mct as required. TTYLOG <Enter> BANR <Enter>	MEM AVAIL: (U/P): 94556775 USED U P: 9063402 32172 TOT: 103652349 DISK SPACE NEEDED: 32 KBYTES.....
6	Repeat Step: 5 above to add additional MG XPEC remote tty ports as needed.	

Procedure 7 – Configure MG XPEC XSM and TTY Ports on Call Server and Register new Media Gateways to the UCM Security Domain (Page 3 of 4)																												
Step	Action		Observation																									
7	Check the status of configured IPMG's. **** <Enter> , to exit overlay > LD 117 <Enter> OAM000 => stat ipmg <Enter>		(Example below: New MGX gateways will show as "Status = REG" when linked with the CS1000E Call Server.) <table><tr><td></td><td></td><td>LAST REG</td><td>LAST REG</td></tr><tr><td>IPMG</td><td>TYPE</td><td>STATUS</td><td>DATE</td></tr><tr><td>004 0</td><td>MGC</td><td>REG</td><td>27/10/2009</td></tr><tr><td>008 0</td><td>MGX</td><td>REG</td><td>27/10/2009</td></tr><tr><td>016 0</td><td>MGX</td><td>CONF/UNREG</td><td>NONE</td></tr><tr><td>016 1</td><td>MGX</td><td>CONF/UNREG</td><td>NONE</td></tr></table>				LAST REG	LAST REG	IPMG	TYPE	STATUS	DATE	004 0	MGC	REG	27/10/2009	008 0	MGX	REG	27/10/2009	016 0	MGX	CONF/UNREG	NONE	016 1	MGX	CONF/UNREG	NONE
		LAST REG	LAST REG																									
IPMG	TYPE	STATUS	DATE																									
004 0	MGC	REG	27/10/2009																									
008 0	MGX	REG	27/10/2009																									
016 0	MGX	CONF/UNREG	NONE																									
016 1	MGX	CONF/UNREG	NONE																									
8	Verify the super loops being configured on the MG XPEC cards show as IPMG Type = MGX.																											
9	Register new MG XPEC's to UCM Security Domain. ****<Enter> ,exit previous overlay > LD 117 <Enter> OAM000 => reg ucm system <Enter> Input, ELAN IP address of the Primary Security Server [UCM IP]: <Enter> User Name (UCM): admin <Enter> Password (admin): (input password) <Enter> (example below: Host Name and IP address displayed.) These elements are registered with the Call Server <table><tr><td>MGC</td><td>10.104.3.166</td></tr><tr><td>MGX</td><td>10.104.3.200</td></tr></table> Do you want to allow these 2 elements to request security domain membership using your credentials? (Y/N) [N] Input, y <Enter> to accept membership		MGC	10.104.3.166	MGX	10.104.3.200	(Example response below) SEC101 Element 10.104.3.200 successfully requested membership in the security domain. SEC101 Element 10.104.3.166 successfully requested membership in the security domain. The Call Server and 2 attached elements successfully requested security domain membership.																					
MGC	10.104.3.166																											
MGX	10.104.3.200																											

Procedure 7 – Configure MG XPEC XSM and TTY Ports on Call Server and Register new Media Gateways to the UCM Security Domain (Page 4 of 4)		
Step	Action	Observation
10	Data dump changes to the CS1000E Call Server. Input, **** <Enter> exit configuration change overlay. > LD 43 <Enter> EDD000 edd <Enter>	Data Dump Complete Status displayed for CCBR and Removable Media for backups.
11	Exit data dump overlay and log off CS1000E Call Server. Input, **** <Enter> OVL000 > logo <Enter> Close your Telnet/SSH connection to the CS1000E Call Server. Disconnect or close session window.	
End of Procedure		

5.0 References

None

<u>Document</u>	<u>Number</u>	<u>Title</u>
CS		
IM		
IS		
XS		

6.0 Appendices

Appendix E – (None)

Appendix F – Glossary (None)

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