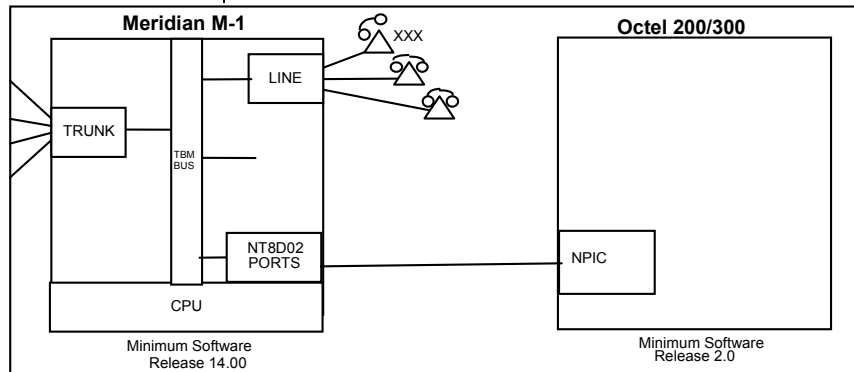


Configuration Note 6199 Revision J (04/02)

Nortel Meridian M1/SL1* (NPIC – Round Robin Hunt) (EMEA)



The NPIC interprets call information from the M2616 display and sets and cancels message- waiting indicators

1.0 METHOD OF INTEGRATION

The NPIC controls up to 16 digital 2616 ports connected to the PBX, depending upon the number of Octel ports required. Each port connection to the NPIC appears to the M1 PBX as a Northern Telecom 2616 digital display telephone. The Octel 200/300 message server receives the necessary call information from the M1 display associated with the digital ports of the NPIC. The ports perform both the function of collecting call information and answering/transferring the call. The NPIC commands the M2616 to read the call information from the display and transmits it to the Octel system which then answers with the appropriate personal greeting. Message Waiting is also performed using M2616 Digital Telephones, which are dedicated to that purpose.

Octel requirements

2.0 OCTEL ORDERING INFORMATION

- Nortel Per Port Integration Line Card (supports up to 16 ports)
 - Adaptive Integration Software (FP X0031)
- Serenade Software 2.0 or higher – Please refer to Section 8.7.
- 25 pair cables with female end amphenol, one per NPIC card, long enough to connect the NPIC to the PBX mainframe which then connects to M2616 ports in the switch. The connection to the NPIC card is through a 25-pair amphenol, male connector.

PBX hardware requirements**3.0 PBX HARDWARE REQUIREMENTS**

- NT8D02 Integrated Services Digital Line (ISDL) ports:
 - Revision AB or higher
 - Up to 16 ports
- QPC578 Vintage C or higher

NOTE: Subscribers with 2500 sets with message-waiting lamps (NE-2500 YQAs) must have special line cards (part number NT8D09) and power supply (part number QSU22) to light the message-waiting lights. If these components are not available, subscribers can use stutter dial tone for message-waiting indication.

PBX software requirements**3.1 PBX SOFTWARE REQUIREMENTS**

Generic X.11, Release 14 to Release 25 with the following:

- EES, Enhanced End-to-End Signalling, Option 10
- SS25, Special Features for 2500 sets, Option 18
- DDSP, Digit Display, Option 19
- BACD, Basic Automatic Call Distribution, Option 40, *see section 8.1*
- ACDA, Automatic Call Distribution, Option 45 *see section 8.1*
- MWC, Message-Waiting Center, Option 46
- DSET, Digital Set, Option 88
- ARIE, Meridian Modular Telephone Set, Option 170
- Subscriber class of service to call forward (including all-calls, ring-no-answer and hunt-on-busy)
- Subscribers class of service for message-waiting

Supported integration features**4.0 SUPPORTED FEATURES**

- Station forward to personal greeting
 - all calls
- System forward to personal greeting
 - busy
 - ring-no-answer
- Message-waiting
 - lights
 - audible message-waiting (stutter dial tone)
- Direct call
- Personal greeting of originally-called party on double-call forward
NOTE: Nortel software allows only two forwarding steps on a ring-no-answer

- Reply to message left by subscriber in internal telephone-answering mode
- Automated attendant
- Multiple return-to-operator
- Outcalling

5.0 CONFIGURING THE M-1 PBX

Refer to PRM, Integration volume, MERIDIAN-1 NPIC for complete information.

SPECIAL NOTE: The following represents changes to the M-1 PBX that will **only** be essential for the Octel integration when configuring the Northern Telecom Network Services (Addendum A refers). This basically refers to a single Overture 200 serving a network of Meridian PBX's. Items not addressed here do not require modification for integration with the Overture 200 and should remain as-is on the PBX. When connecting an Overture 200 to a Meridian **not** in a network of other Meridian PBX's, please ignore section 5.0 and go to section 5.1.

Before beginning programming, it is recommended that a hard copy of the customer data block be printed in overlay 21 to verify the existing programming. It is also recommended that a hard copy of the terminal number block (TNB) be run for M-1 sets and for 2500 sets to show existing programming. Use overlay 20 to retrieve this information.

- ☐ If necessary, change the following parameters in overlay 15 to the underlined values. The default is in parentheses.

Programming PBX system parameters

REQ	CHG	
TYPE	CDB	Customer data block
CUST	0-31	Customer number
OPTIDP		Digit Display allowed
	MCI,	Message center allowed

Customers can selectively forward DID verses non-DID calls on busy or ring-no-answer condition. This can be done for calls being routed to the message center. Program the following as requested:

MDID	<u>YES</u> , (NO)	No-answer DID calls are (are not) routed to the Message Center
NDID	<u>YES</u> , (NO)	No-answer non-DID calls are (are not) routed to the Message Center
MWFB	<u>YES</u> , (NO)	DID calls encountering busy are (are not) routed to Message Center

There are four ways to which calls can be answered system-wide for non-DID and DID calls:

FDN = Follow forwarding DN

HNT = Hunt

ATT = Attendant

FNAD	FDN, HNT, ATT,	Program as required by your customer Forward DID calls
FNAN	FDN, HNT, ATT,	Program as required by your customer Forward non-DID calls
FNAL	FDN, HNT, ATT,	Program as required by your customer

5.1 PROGRAMMING THE PBX HUNTING METHOD

**** PLEASE NOTE THAT LINEAR HUNTING IS NO LONGER SUPPORTED DUE TO ISSUES WITH PORTS GETTING STUCK IN WFD STATE. PLEASE ENSURE ALL NEW NPIC INSTALLATIONS ARE SET-UP FOR ROUND ROBIN HUNTING ON THE PBX PORTS. ALSO CHANGE ALL EXISTING LINEAR SET-UPS TO ROUND ROBIN AS SOON AS POSSIBLE. OVERLAY 57 SHOULD BE CHANGED FOR THE HUNT GROUP CONCERNED SO THAT IT IS PROGRAMMED AS RRB NEXT TO THE HUNT FIELD.****

5.2 CONFIGURING THE M-1 TERMINAL NUMBER(S)

One M-1 TN is configured for each M2616 required.

Here is an example of a four port Octel 200/300 message server hunt group where 64139 through 64142 are port extensions. The pilot number of this hunt group is 64100.

<u>Pilot No</u>	<u>PBX Extension</u>	<u>(HUNT/FDN/EFD/EHT)</u>
64100	64139	64100
64140	64100	64141
64100	64142	64100

Note: The Hunt Group Pilot number must match the first voice mail port number (**not on PBX side; it must be separate number**), otherwise the system will not recognise the incoming number at put the call through to Open Trees. This hunt group should be programmed to hunt in a round robin fashion (RRB next to HTYP parameter). The example above shows a pilot number of 64100 for Internal users to call Serenade. 64100 is the pilot DN for hunt group 50.

Programming the PBX hunt
group for Round Robin

- Using overlay 57 programming for the hunt group set-up, set-up the hunt group parameters for your system. Use the example below when setting up your own hunt group :-

Example for hunt group 64100:

PLDN	64100	Pilot DN number for hunt group.
USEGPHT		Makes this a group hunt.
LSN0	50	Hunt group 50 used here.
HTYP	RRB	Sets Round Robin hunting method.
CFWI	NO	Leave this at default.
HQUE	0, 1, (ALL)	ALL calls will queue when all voice mail ports are busy.

- Using overlay 11, program the M2616 sets that will be connected as links for the NPIC. Assign key 0 A PHANTOM OR SPARE NUMBER - THIS NUMBER WILL NEVER BE 'RUNG' extension number of the port. Program one digital telephone for each Octel port. When defining the keys for each 2616, carefully follow the key allocations listed below.

Example for Port 1:

REQ	NEW	
TYPE	<u>2616</u>	Digital set data block
TN	III S CC U	Terminal number: loop (0-159) shelf (0-1) card (1-10) unit (0-7)
CDEN	SD, (DD), 4D D8	Density of this card is single, (double), quad
CUST	0-31	Customer number
DESOCTEL1		Designation for telephone
CLS	HTA	Allow hunting sequence on busy
	ADD	Allow automatic digit display
	CFTA	Call forward by type allowed
	HBTA	Hunting by type allowed
	SFA	Secondary forwarding allowed
	FNA	Forward no answer allowed
	HPR	Allow high priority
	DNDA	Allow dialed name display allowed
	CNDA	Allow call party name display
	WTD	Warning tone denied
	MWD	Message waiting denied
	HFD	Hands free Denied (Allows configuration of key 15 as DSP)
	AHD	Automatic Hold Denied

Programming the digital port for the M2616 sets

KEY	00 SCR xxxx	Single call ringing DN key where xxxx is the extension assigned to the port. (e.g. 64139 as above)
	15 TRN	Transfer key (must be mapped to key 15 for transfer to work)
FDN	64100	
EFD	64100	
EHT	64100	
HUNT	64100	These prompts must be set to the hunt group pilot number on ALL extensions

Example for Port 2:

REQ	NEW	
TYPE	<u>2616</u>	Digital set data block
TN	III S CC U	Terminal number: loop (0-159) shelf (0-1) card (1-10) unit (0-7)
CDEN	SD, (DD), 4D D8	Density of this card is single, (double), quad
CUST	0-31	Customer number
DESOCTEL	2	Designation for telephone
CLS	HTA ADD CFTA HBTA SFA FNA HPR DNDA CNDA WTD MWD AHD	Allow hunting sequence on busy Allow automatic digit display Call forward by type allowed Hunting by type allowed Secondary forwarding allowed Forward no answer allowed Allow high priority Allow dialed name display allowed Allow call party name display Warning tone denied Message waiting denied Automatic hold denied
KEY	00 SCR xxxx	Single call ringing DN key. where xxxx is the extension assigned to port 2 (e.g. 64140 as per example)
	15 TRN	Transfer key
FDN	64100	
EFD	64100	
EHT	64100	
HUNT	64100	These prompts must be set to the hunt group pilot number on ALL extensions

- With the exception of port 1 on the voice mail, ensure that each port extension (DN) on the PBX matches the port extension on the voice mail. Port 1 DN on the PBX must not be the same as the Pilot number for the hunt group, although the voice mail extension port 1 must match the PBX Pilot number.

NOTE: Message Waiting Indication Ports must NOT be in the hunt group chain. Please also ensure the Message Waiting Indication ports are programmed as shown below (one per MWI port):

Example for Message Waiting Port:

REQ	NEW	
TYPE	<u>2616</u>	Digital set data block
TN	III S CC U	Terminal number: loop (0-159) shelf (0-1) card (1-10) unit (0-7)
CDEN	SD, (DD), 4D D8	Density of this card is single, (double), quad
CUST	0-31	Customer number
DESOCTEL2		Designation for telephone
CLS	HTA	Allow hunting sequence on busy
	ADD	Allow automatic digit display
	HPR	Allow high priority
	DNDA	Allow dialed name display allowed
	CNDA	Allow call party name display
	WTD	Warning tone denied
	MWD	Message waiting denied
	AHD	Automatic hold denied
KEY	00 SCR xxxx	Single call ringing DN key. where xxxx is the extension assigned to the MWI port (port 8 or 16)
	13 MIK	Message indication key
	14 MCK	Message cancel key
	15 TRN	Transfer key

- ☐ Run a hard copy of the terminal number block (TNB) for each M-1 set to reflect and verify the additions and changes just made. Use overlay 20.

5.3 CALLING PARTY NAME DISPLAY PROGRAMMING

- ☐ Calling Party Name Display must be programmed in LD 95 to show the condition of the forwarded call. Program the Calling Party Name display as follows;

REQ CHG
CNFG
MXLN

Octel Message Server Configuration

STAL
DFLN
DES
RESN YES
CFWD FWDA
CFNA CFNA
HUNT BUSY
PKUP PKUP
XFER
AAA
NITC

NOTE: Items left blank do not require changes.

6.0 CONFIGURING THE OCTEL VOICE-PROCESSING MODULE

Refer to Installation and Maintenance Manual, Integration Volume, for complete information.

☐ SYSTEM PARAMETER TABLE:

- Set Parameter 3 to Northern Telecom Meridian 1 (Option 15 for Manufacturer Number , then Option 2 for Model Number)
- Set System Parameter 33 to NONE
- Set System Parameter 45 to NONE
- Set System Parameter 46 to NONE
- Set System Parameter 77 to YES
- Set System Parameter 116 to YES
- Set System Parameter 117 to 5
- Set System Parameter 170 to NO
- Set System Parameter 198 to 1 ('A' Law)
- Set System Parameter 254 if non-standard transfer codes are required
- System Parameter 270 should be set to NONE. If a change is required, contact Technical Support.
- Set System Parameter 296 to NO – (See considerations Sec 8.17)

☐ SLOTS TABLE:

The M2616 sets connect to the Octel via a 50-pin male telco connector. This DB25 connects to P1 through P11 at the rear of the system. For correct functionality, each port must be set up to do either call processing or message waiting.

NOTE: PBX Ports must not be set-up to perform both functions. You must ensure all PBX ports designated for the sole purpose of MWI are not in the main hunt group that the call processing ports are in.

When links are configured in the Slots Table, assign them in the following manner:

NOTE: The following programming pertains to systems with Release 3.0.1-2 and below. Systems with release 4.0.0-2 and above must have all the MWI ports assigned to a separate NPIC card. All other slot programming will remain the same. See considerations section 8.16 for more info on this.

When ports are configured for message waiting assign them in the following manner: Start with port 16 on the last NPIC card, and using port 16 on each card, work towards the first NPIC. If additional message waiting capacity is desired, start with port 8 on the last NPIC card and work again toward the first card. This allocates message waiting activity evenly across processors in the NPIC card. There are two processors on each card, one for the first 8 ports and one for the second 8 ports. Additionally, if the links assigned to message waiting activity are spread across the cards and loops in the switch, the message waiting performance is better. (Call processing ports should also be spread across cards/loops on the switch to enhance performance and increase reliability). You must ensure these MWI ports are not in the main call processing hunt group that all other ports will be placed in. MX Ports must be placed in their own separate hunt group.

- Configure all ports for AX mode (includes MWI ports).
- Set the outcalling column to NO for ports configured for message waiting indication. Ensure only a small proportion of the call processing ports are allowed to outcall. If only one NPIC card is used it is recommended that only the last few ports are allowed to outcall. If there are, for example, three NPIC cards it is strongly recommended that the first NPIC is not allowed to outcall, and only four ports per processor on the remaining NPIC cards can outcall to handle non-message waiting indication outcalls. (e.g., networking, off-site/on-site message waiting notification).
- Configure TEST for NO on ALL ports.
- The LSPTAB Table is configured for the choice 24-PIC_NT.

One NPIC in the message server must be designated as primary, to provide clock synchronization with the PBX digital card supporting the NPIC. When more than one NPIC card is installed in the message server, the second card is designated as secondary, and the third card as tertiary. The remaining cards installed are designated as NONE. An example of a slots table for a 32 port NPIC integration is shown on the next page: -

SLOT	CARD TYPE	PORT	EXTENSION#	COS	MODE	OUTCALL	TEST	SYS
1	PICNT	1	3164100	511	AX	NO	NO	1
		2	3164140	511	AX	NO	NO	2
		3	3164141	511	AX	NO	NO	3
		4	3164142	511	AX	NO	NO	4
		5	3164143	511	AX	NO	NO	5
		6	3164144	511	AX	NO	NO	6
		7	3164145	511	AX	NO	NO	7
		8	3164146	510	AX	NO	NO	8
		9	3164147	511	AX	NO	NO	9
		10	3144148	511	AX	NO	NO	10
		11	3164149	511	AX	NO	NO	11
		12	3164150	511	AX	NO	NO	12
		13	3164151	511	AX	NO	NO	13
		14	3164152	511	AX	NO	NO	14
		15	3164153	511	AX	NO	NO	15
		16	3164154	510	AX	NO	NO	16

Message Waiting Link= 8 **DEFAULT**

COS=

Message Waiting Link= 16

LSP table: PIC_NT

PRIMARY SYNC RECEIVER OF CLOCK

SLOT	CARD TYPE	PORT	EXTENSION#	COS	MODE	OUTCALL	TEST	SYS
2	PICNT	1	3164155	511	AX	NO	NO	1
		2	3164156	511	AX	NO	NO	2
		3	3164157	511	AX	NO	NO	3
		4	3164158	511	AX	YES	NO	4
		5	3164159	511	AX	YES	NO	5
		6	3164160	511	AX	YES	NO	6
		7	3164160	511	AX	YES	NO	7
		8	3164161	510	AX	NO	NO	8
		9	3164162	511	AX	NO	NO	9
		10	3164163	511	AX	NO	NO	10
		11	3164164	511	AX	NO	NO	11
		12	3164165	511	AX	YES	NO	12
		13	3164166	511	AX	YES	NO	13
		14	3164167	511	AX	YES	NO	14
		15	3164168	511	AX	YES	NO	15
		16	3164169	510	AX	NO	NO	16

Message Waiting Link= 8

COS=

Message Waiting Link= 16

LSP table: PIC_NT

SECONDARY SYNC RECEIVER OF CLOCK

Verify that the digital channels of
the NPIC are active

- ☐ COS TABLE:
 - Add attribute 6 to call extension first before playing greeting.
 - Add attribute 9 to COS for mailboxes with message waiting indicators used for their associated extensions.
 - Add attribute 58 to PORT COS for those ports used in special applications that do not require integration. These ports would be supported by analog line cards rather than the NPIC cards.

7.0 TROUBLESHOOTING — VERIFY M-1 TNs ARE ACTIVE

- ☐ To ensure that the M-1 TNs are active, use overlay 32:

STAT XXXX Where XXXX is the TN of
the M-1 programmed as an
Octel port

The status displayed is either:

IDLE or DSBL

IDLE status is desired. If DSBL is displayed, enable them with
the following in overlay 32:

ENLU XXXX Where XXXX is the TN of
the disabled TN

7.1 TESTING THE INSTALLATION

Refer PRM, Integration Volume, Meridian M-1, section 13.5.

- ☐ Complete the test procedure listed in the Serenade Integration Volume V for the NPIC Integration.
- ☐ After completing the test procedure, delete all test mailboxes, and return any altered PBX name display programming to the desired entries.

Steps to test the installation
when completed

Important notes concerning this
integration

8.0 CONSIDERATIONS/ALTERNATIVES

8.1 Determine if the ACD option is required. Meridian integration uses hunting and does not require ACD unless the number of ports exceeds the number of hunting steps available on your PBX model. Eighteen steps are supported on the Options 11, 21, 51, or 61. Thirty steps are available on the Options 71 and 81. If the number of ports exceeds the number of hunting steps, ACD is required to expand the hunting capability.

8.2 Verified software levels are 14 through 25 on the Meridian.

8.3 “Secretarial forwarding” rings the station instead of forwarding. Secretarial filtering allows a caller to forward his/her telephone to a secretary, permitting the designated secretary to ring the station of the forwarded party even though the telephone is in an all-calls-forward mode. If a subscriber has his/her station all-calls forwarded to the voice processing module, the first port of the voice-processing module hunt group will act as the secretarial position. Therefore, any transfers from the first port in the hunt group of the voice module will not all-calls forward, and instead will receive ring-no-answer. In other words, if the first port of the voice-processing module hunt group performs a transfer to a station that is all-calls forwarded to the voice-processing module, the station will ring instead of forwarding the call. A workaround for this is to set all stations to forward primary number of the hunt group, but direct all trunks to the second port. This will ensure that trunk calls will not try to be transferred on the first port.

8.4 Network Message Services is supported with the NPIC. The minimum software is Release 15, and requires the following software options: Network Message Services (option 175), Advanced ISDN Network Feature (option 148), ISDN Signaling (option 145), ISDN Primary Rate Access (PRA, option 146) or ISDN Signaling Link 1 (ISL, option 147), Message Center (option 46), End to end signaling (option 10), and Coordinated Dial Plan (CDP, option 59) or Network Automatic Route Select (NARS, option 58).

8.5 Automated Attendant/ECP applications transferring calls between NMS nodes may experience loss of integration. When Trunk Route Optimization is enabled on NMS trunks, calls transferred to stations on remote switches that forward without first ringing the station do not pass called party ID to the NPIC port. Currently there is no workaround for this issue.

8.6 Network Call Re-Direct on Meridian PBX Network. Please note that there is a parameter called ‘Network Call Re-Direct’ in the trunk route programming (overlay LD14/LD16) of the Meridian programming which will cause integration problems when set to ‘YES’. The integration problem that has been found is when a caller contacts the operator and they ask to be connected to a remote extension user who is all calls forwarded to voice mail. The Operator performs an unsupervised transfer to the extension

number (release to ringing) and the caller basically ends up at the Company Greeting rather than the Personal Greeting of the called persons mailbox. This problem will only surface when the customer has one voice mail system which serves the local site and remote sites using a network of Meridian PBX's. Please ensure this parameter is disabled, otherwise there is no workaround for the issue with the voice mail integration delays. This also applies to SIC 8 integrations.

8.7 NPIC on Serenade 2.0/3.0 Please note that only one LSP table is available on early versions of Serenade 2.0. This will be evident when configuring the slots table; only the default LSP table will be available to choose. Also note that image NPIC image 2.12 will also be the default image on S.2.0. This image is known to have problems, one of which is the ports locking up. Octel Recommend that this image be upgraded to 2.23 minimum. This is known to be a good image which has the patches available for it. Although NPIC works with Serenade 2, Octel strongly recommend that the customer has Serenade S.3.0.1-2 software installed as it has the 2.23 NPIC image incorporated within it.

8.8 NPIC on Serenade 4.0. Please note that Serenade 4.0 will not have line card patches. The LSP table is now used where certain LSP bytes can be adjusted to achieve what the patches achieved for Serenade 3.0.0-1 and below. Please contact UK TAC to get the LSP table altered if you encounter any line card related problems, like DTMF 3 of DTMF B detection.

8.9 Adjustment of Application Delays. Please ensure the application delays 129 and 130 are correctly adjusted. Contact your local CCC in order to ensure these application delays are correctly set. The values they should be set to are 2000ms for application delay 129 and 8000ms for application delay 130. These application delays control the speed of message waiting indication (MWI) and message waiting notification (MWN) respectively.

8.10 Outcalling configuration for the NPIC in the slots table.

Please ensure that only a small number of ports in the hunt group can also make outcalls. A typical figure will be one third of all CPI ports, although this figure may need to be fine tuned. It is recommended that only 4 ports per processor on the NPIC will be able to outcall. If the system only has one NPIC installed then only allow the last few ports to outcall. If there are two or more NPIC ports then 4 ports per processor (8 ports per NPIC) should only be allowed to outcall. The first NPIC should not be allowed to outcall in this set-up. This will ensure we have redundancy with outcalling.

8.11 Erroneous errors can be logged for MWI on the hardware error table when MWI works fine to the handsets. This is where we perform MWI successfully to all stations but the PBX returns an error message to us which we log as an MWI error. The hardware error that is logged is type 24. The data 1 and data 2 fields are 07 and 02 respectively. These erroneous errors can be ignored however it has been found to be caused by a config error on the PBX. The PBX errors that are logged are PRI265. The PBX engineer may see something like “PRI265 DCH: 4 DATA: RESP NOXLAN **2608000010** 5800 0”. In this case it was found that the FLEN prompt on the Meridian was too short (it was set at 4 and should have been set to 10). The FLEN is ascertained by the error message above which has 10 digits indicated as “**2608000010**”. It is always worth Nortel checking the PBX configuration if we log these erroneous errors. Failure to clear these errors can fill the hardware error table up with irrelevant MWI errors and hence prevent any other errors from being logged. The Serenade may also make many outcalls once these errors clock up high enough in quantity.

8.12 It has been found on some customer sites that MWI needs an adjustment in the MWI sequence from the Serenade so that it can work correctly. If there is a delay in obtaining confirmation back from the PBX when sending MWI over a Meridian network to remote extensions please contact Technical Support so that a delay can be adjusted to compensate for this problem. This will ensure MWI lamps to remote extensions work reliably.

8.13 Extenal calls via the Operator to mailbox extensions which are all calls forwarded to voice mail may encounter the prompt “please enter your security code” rather than the called person’s greeting. This problem occurs for local callers as external callers who ask for an extension via the Operator. These callers send CLI. This problem has been identified as a PBX issue whereby the Operators console sends the information to the 2616 display phone on the NPIC so quickly that it cannot display it. This will result in only the called extension being shown on the 2616 integration set which we interpret as a direct internal call from the called extension; resulting in us playing the wrong prompt. Please note this can be fixed by ensuring the PBX engineer loads five patches on the PBX. The patches basically slow down how quickly the Console sends the information to the 2616. The information for these 5 patches are:-

16	BV82172	23/DEC/98	p11411	16/2/0	p11411.cp2
17	BV80238	cp2	MPLR10968		p10968.cp2
19	BV82936	ISS1:1of3	CORE		p12595a.cp2
20	BV82936	ISS1:2of3	CORE		p12595b.cp2
21	BV82936	ISS1:3of3	CORE		p12595c.cp2

8.14 Customers may experience a problem with Nortel release 25.10; where the PBX does not provide the correct display information which is required to integrate correctly.

Customers must request that Nortel install patch MPLR 12969 in order to resolve this problem. This problem does not exist from release 25.15 and above.

8.15 Be careful when programming the port stations (2616 sets). If you don't use the hands free button you get 15 buttons that you can program, button 15 being programmed for XFER to allow transfers to work correctly. If you use hands free the programming does not allow you to program button 15, hence transferring calls will become an issue. Do not use the hands free feature for the port stations.

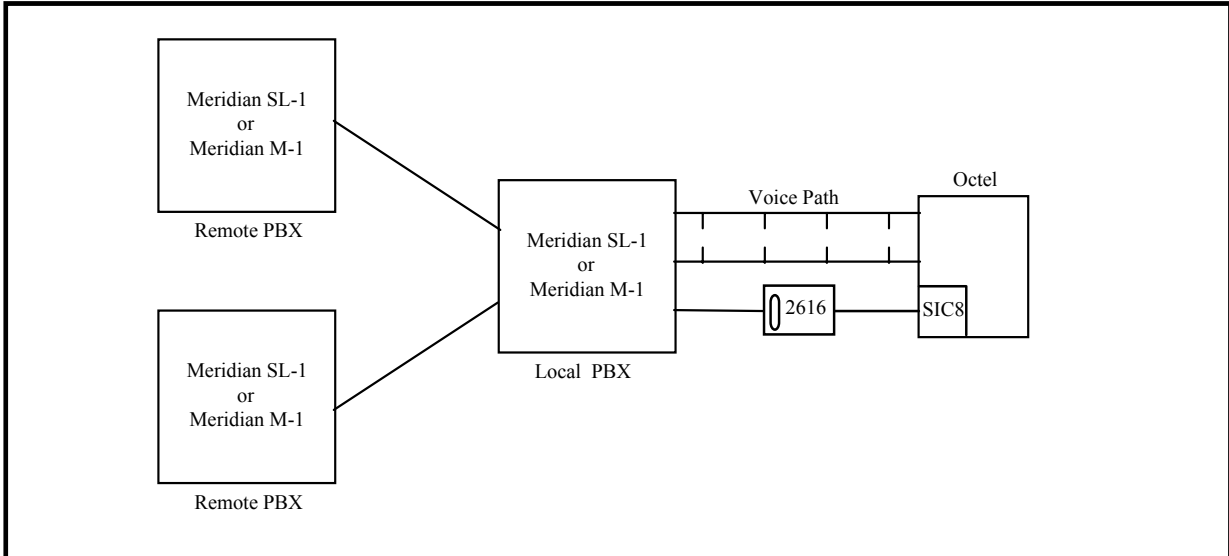
8.16 Please note that there can be issues with type 70/33 hardware errors occurring when the NPIC card is under load. When configuring the MWI links on the NPIC slots as per the suggested slots table on page 10 it can cause the NPIC card to reset. This, in turn causes users to complain or ring no answer on the effected ports while the card is restrating and out of service. The hardware error 70 is logged just prior to the hardware error 33 when the NPIC card restarts. To stop this happening please ensure you contact Technical Support in order to get NPIC patches 3, 4, 7 and 8 loaded. The NPIC(S) effected will require a restart to make the patches effective once loaded and applied. The alternative to this is to add a separate NPIC card which is dedicated to just MWI tasks only with all PBX ports used for MWI removed from the main call processing hunt group. All other card must handle CPI only.

8.17 Please ensure System Parameter 296 is set to NO for this integration hunting method. It should only be set to YES for the ACD hunting method. Field experience has shown a side effect if this parameter is set to YES. The side effect is the Serenade ports being unable to outcall. This effectively stops analogue networking, offsite notificatiopn and Auto Attendant features from working. The PBX will not se the Serenade go off-hook nor the digits we dial.

8.18 A problem has been noted on the PBX whereby Serenade transfers a caller to the Intercept extension and the Serenade port used for the transfer is then excluded from the main hunt group. The effect is the Serenade port cannot make any more calls. A Nortel patch has been written to fix this problem at release 23.25 upwards. The port should be returned to the Group Hunt List as an idle telset. The patch reference is 05654_1.cp3. Please ensure this patch is loaded for this release. It should be incorporated into later releases. Please check with the PBX maintainer to ensure this has been taken care of.

9.0 ADDENDUM A -

NORTHERN TELECOM'S NETWORK MESSAGE SERVICES



The Northern Telecom Network Message Services-Message Center feature is designed to allow a centralized message center to serve multiple Northern Telecom PBXs

The Northern Telecom Network Message Services-Message Center feature is designed to allow a centralized message center to serve multiple Northern Telecom PBXs. With this feature an Octel system, acting as a message center, can provide integration for multiple Meridian SL-1 or Meridian M-1 PBXs in an ISDN network. Remote subscribers receive all integration features.

The Northern Telecom Network Message Services feature requires one of the following Northern Telecom networking capabilities: ISDN Primary Rate Access (PRA) or ISDN Signaling Link (ISL). Both require a signaling path, called the D-channel. PRA networks utilize a dedicated channel of a T1 span for the D-channel. ISL networks utilize a dedicated data line for the D-channel, usually requiring modems.

To support an ISL network for integration, the D-channel must operate at 9600 bps or faster. Slower speeds can cause message waiting notification to become unreliable. There is no restriction for PRA networks, which support a D-channel operating at 56 kbps.

Below is a summary list of the PBX requirements. This list is not intended to be all inclusive; it is meant as a guideline only. *Some options have hardware and software prerequisites that are not listed.* It remains the responsibility of the customer and PBX vendor to identify all necessary hardware and software components and to correctly configure the Northern Telecom Network Message Services-Message Center.

NORTHERN TELECOM PBX REQUIREMENTS:

- Integration Requirements for Local PBX-refer to appropriate Configuration Note
- X11 Release 16 Software (Minimum)
- Network Message Services (option 175)
- Advanced ISDN Network Features (option 148)
- ISDN Signaling (option 145)
- ISDN Primary Rate Access (PRA, option 146) *or* ISDN Signaling Link1 (ISL, option 147)
- Message Center (option 46)
- End-to-End Signaling (option 10)
- Coordinated Dial Plan (CDP, option 59) or Network Automatic Route Select (NARS, option 58)

¹ *With ISL networking, the D-channel must operate at a minimum of 9600 bps.*

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