ADTRAN®

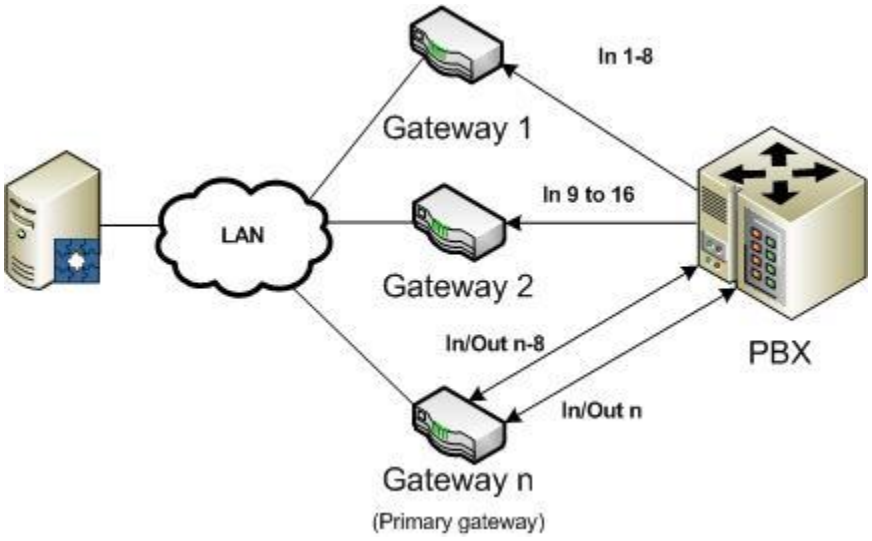
NetVanta Unified Communications Technical Note

Mitel SX-200 Integration with Dialogic Media Gateway

Introduction

This technical note applies to the Mitel SX-200D, SX-200 Light, Mitel SX-200 ML/EL, and Mitel SX-200 IP Communications Platform (ICP).

The NetVanta UC Server integrates with the Mitel SX-200 using SS430 digital station emulation with the Dialogic Media Gateway (DMG1008MTLDNI). If more than eight voicemail ports are required, multiple gateways can be configured.



The UC server is configured to have the primary gateway domain/IP address. The primary gateway provides the following capabilities:

- Message waiting light gateway
- Outgoing calls:
  - Active Message Delivery
  - Pager notification
  - Outbound faxing
  - Outbound notification

Each Dialogic Media Gateway port connects to a Mitel DNIC (Digital Network Interface Card) port.

Minimum Software Versions

- **Mitel SX-200:** LW17 with System Option 98 - Support 3DN, 4DN, and 400 series Set Types
- **NetVanta UC Server**: Version 4.3 or higher

Supported Features

The following are the features supported by the integration:

- Call forwarding to personal greeting:
  - Busy
  - Ring-no-answer
  - Unconditional
- Direct call – Manage messages (prompt for mailbox password)
- Transfer capabilities:
  - Blind transfers
  - Supervised/assisted transfers
- Message waiting lights
- Caller ID (if supplied by private branch exchange (PBX))
- Notification services:
  - Active message delivery
  - Pager notification
  - Email notification

- Fax support:
  - Incoming fax
  - Incoming direct inward dialing (DID) fax (direct to user's mailbox)
  - Outgoing fax (desktop fax)
  - Fax-on-demand
- Outbound notification (database integration with outbound notification)
- Record a call

Mitel SX-200 Configuration

This section details the Mitel SX-200 configuration required to integrate with the UC server through the Dialogic Media Gateway digital set emulation gateway.

The following options must be configured for proper integration with the UC server:

- Form 2 – Feature Access Codes
- Form 3 – Class of Service Options
- Form 4 – System Options and Timers
- Form 09 – Desktop Device Assignment
- Form 17 – Hunt Group
- Form 19 – Call Rerouting

Form 4 – System Options/System Timers

Ensure that the automatic cancellation of message waiting lights is disabled. Depending on the software version of the Mitel SX-200, Option 98 may or may not be required. For newer Mitel SX-200 PBX versions, ensure that Option 98 – 400 series set support – is enabled.

SYSTEM OPTIONS/SYSTEM TIMERS

SYSTEM OPTION	STATUS	OPTION
Cancel 24-hour Message Waiting	**DISABLED**	**07**
Support 3DN, 4DN and 400 series Set Types	**ENABLED**	**98**
Centralized Attendant/VoiceMail	ENABLED	113

Form 2 – Feature Access Codes

Ensure that you record the message waiting light feature access code in the Dialogic Media Gateway – Gateway advanced options. The Send Message feature access code is used for toggling message waiting lights.

Dialogic Media Gateway > Gateway > Gateway Advanced

- Turn MWI On FAC: <Access Code>1 (i.e. *411)
- Turn MWI Off FAC: <Access Code>2 (i.e. *412)

FEATURE ACCESS CODES

FEATURE	FEATURE NAME	ACCESS CODE
41	**Send Message**	**41**

Voicemail Port Configuration

Form 3 – Class of Service

The following Class of Service (COS) options are required for the voicemail ports. Note that Option 229 may have a different name (COV/DNIC Voicemail Port) in older versions of SX-200 PBX software revisions.

Note: Trunk-to-trunk connection options are required to connect incoming callers to outbound destinations.

CLASS OF SERVICE OPTIONS

[COS:10 UCSERVER] OPTION	STATUS	OPTION NUM
Can Flash If Talking To An Incoming Trunk	**ENABLED**	**212**
Can Flash If Talking To An Outgoing Trunk	**ENABLED**	**213**
Voice Mail Port	**ENABLED**	**229**
Display Prime As Forwarder	ENABLED	258
Message Sending	**ENABLED**	**259**
CO Trunk To CO Trunk Connect	**ENABLED**	**313**
CO Trunk To Tie Trunk Connect	**ENABLED**	**314**
CO Trunk To DID Trunk Connect	**ENABLED**	**315**
Tie Trunk To Tie Trunk Connect	**ENABLED**	**316**
Tie Trunk To DID Trunk Connect	**ENABLED**	**317**
DID Trunk To DID Trunk Connect	**ENABLED**	**318**
Display ANI/DNIS/CLASS Information	**ENABLED**	**502**
COV Voice Mail Displays Calling	**ENABLED**	**511**

Form 9 – Desktop Device Assignment

Each digital station voicemail port is configured as a Superset 430 telephone.

DESKTOP DEVICE ASSIGNMENTS

B/S/CCT	TEN	EXTN	COS	COR	TYPE	PG	NAME	ASSOC	COMMENTS/LOC	CESID
1/13/01	1	501	10	1	**430**		VMAIL01			
1/13/02	1	502	10	1	**430**		VMAIL02			
1/13/03	1	503	10	1	**430**		VMAIL03			
1/13/04	1	504	10	1	**430**		VMAIL04			

Each of the voicemail ports must have the following button configuration:

DESKTOP LINE APPEARANCES

KEY	TYPE	DIR	RING	SEC	DSS	EXT	NUM	TRK	NUM	LABEL	R#
***01**	**Prime**	**In/Out**	**Immed**	**NO**		501					
02	Speed Dial										
03	Speed Dial										
04	Speed Dial										
05	Speed Dial										
06	Speed Dial										
07	Speed Dial										
08	Speed Dial										
09	Speed Dial										
10	Speed Dial										
11	Speed Dial										
12	Speed Dial										

Form 17 – Hunt Group

Each voicemail port is configured to be part of a hunt group. The hunt group is a pilot number that subscribers use to access voicemail.

HUNT GROUPS

[GRP 10:500][CIRC][STN/SET]	EXT	NUM	BAY	SLT	CCT	COMMENTS
1/13/01	501		01	13	01	
1/13/02	502		01	13	02	
1/13/03	503		01	13	03	
1/13/04	504		01	13	04	

HUNT GROUP OPTIONS

[GRP 10:500][CIRC]STN/SET]	OPTIONS
Access Code	
Name	
Overflow	
Record-a-Call: Maximum Port Usage (1-20)	
System Greeting (1-8)	

Regular Extension Configuration

Form 3 – Class of Service

The following forms must be configured for regular extensions. Default configuration generally applies. If the connected telephone is an ONS (On Premise Station), additional options are required to ensure that the message waiting indicator feature is supported.

ONS Port integration – Choose from one of the two Class of Service options

[COS:xx] OPTION	STATUS	OPTION NUM
Message Waiting Setup – Bell	ENABLED	231
Message Waiting Setup – Lamp	ENABLED	232

Form 19 – Call Rerouting Table

The call rerouting table configures the default call forward destinations for extensions. The forwarding destinations are configured using the hunt group pilot number.

CALL REROUTING TABLE

TEN: 01] CPN	DAY	N1	N2
		--	500
Call Forward Busy Number For This Tenant	**500**	**500**	**500**
Call Forward No Answer Number For This Tenant	**500**	**500**	**500**
Voicemail Number For This Tenant	**500**	**500**	**500**

Dialogic Gateway Configuration

This section highlights configuration settings for the Dialogic Media Gateway. This section is to be used in conjunction with *Dialogic Media Gateway Configuration Guide* technical note, available online at *http://kb.adtran.com/*.

Mitel Tone Definition File

Dialogic provides specific tone definition files that are available from the Dialogic Software Image (MTLDNI_Cfg_Mitel.ini). Ensure that you import the tone definition file into each gateway integrated with the SX-200.

Display Reason Interpretation

The Dialogic Media Gateway comes pre-loaded with SS430 display integration reason translations. Additional translations must be added to ensure proper disconnect detection.

To add the reason translation:

1. Navigate to the IP address of the gateway.
2. Add the following information:

```
;Added by NetVanta - use to avoid port lockups
rule .*HUNG UP.*
reason disconnect

rule .*LOCKED OUT.*
reason disconnect
```

3. Select **Apply Changes**.

```
; MITEL SX-200


; Reason translations
tran reason |BUSY|busy
tran reason |NO ANS|no-answer
tran reason |DO NOT DISTURB|no-answer
tran reason |ALWAYS|fwd-all
tran reason |FWD|fwd-all
tran reason |FORWARD|fwd-all
tran reason |FORWARDED|fwd-all
tran reason |default|direct
tran origin |default|internal

; time in first row, ignore these
rule .*\d+:\d+.*
reason time

; TRUNK 102 IS CALLING          FWD FROM JOEY ALWAYS
rule \bTRUNK\b\d*\b\D*\bFROM\b\d*\b\w*\b~*\b
src_name Outside_Call
```

```
dst_number 2
dst_name 2
reason 1
origin external

; JOE IS CALLING         FWD FROM JOEY ALWAYS rule
\b\d*\b\w*\bIS\b\D*\bFROM\b\d*\b\w*\b~*\bsrc_number 1src_name 1dst_number 2dst_name
2reason 1; 455 IS CALLING ; JOE IS CALLING blah blah blah
; JOE IS RINGING YOU BACK
rule \b\d*\b\w*\bIS\b\D*
src_number 1
src_name 1

; JOE     FORWARDED FROM 732
rule \b\d*\b\w*\D*\bFORWARDED FROM\b\d*\b\w*\b~*\b
src_number 1
src_name 1
dst_number 2
dst_name 2
reason 1

; JOE     FWD FROM 732
rule \b\d*\b\w*\D*\bFWD FROM\b\d*\b\w*\b~*\b
src_number 1
src_name 1
dst_number 2
dst_name 2
reason 1

;Added by NetVanta - use to avoid port lockups
rule .*HUNG UP.*
reason disconnect

rule .*LOCKED OUT.*
reason disconnect
```

Call Recording Application

Some versions of the Mitel SX-200 allow an extension to record the audio contents of a call in progress. The Mitel SX-200 **Record a Call** feature allows a phone to initiate a voice conference that records both parties of a conversation. When calls are recorded, the resultant audio is put in the initiating user's voicemail inbox. If the user is configured for Unified Messaging or Integrated messaging, the voice message subject contains *Voice Message from <EXT>*. The <EXT> is the extension that requested to record the call.

Mitel PBX Configuration

For the **Record a Call** feature to function properly, the Mitel SX-200 must have system option 87 enabled. Refer to the Mitel SX-200 documentation for details on how to configure the feature.

Follow the instructions on the Mitel SX-200 for the following forms:

1. Form 04 – System Options
2. Form 03 – Class of Service Options (Voicemail COS and Extension COS)
3. Form 09 – Desktop Device Assignment (Feature key programming)
4. Form 17 – Hunt Group Options
5. Form 19 – Call Rerouting

Dialogic Media Gateway Configuration

The Dialogic Media gateway call party configuration must be changed so that call recorded calls are interpreted as forwarded calls with a no reason behavior. All other calls that are forwarded to the Dialogic Media Gateway ports will be interpreted as calls that are forwarded always. This change will not have an impact on the regular behavior of UC Server.

The Dialogic Media Gateway includes additional Call Party configuration.

1. Navigate to the IP address of the gateway.

2. Change the following information in the cpid.htm page
   ```
   ; Reason translations
   tran reason |BUSY|fwd-all
   tran reason |NO ANS|fwd-all
   tran reason |DO NOT DISTURB|fwd-all
   tran reason |ALWAYS|fwd-all
   tran reason |FWD|fwd-all
   tran reason |FORWARD|fwd-all
   tran reason |FORWARDED|fwd-all
   tran reason |default|direct
   tran origin |default|internal
   ```

3. Add the following information to the cpid.htm page
   ```
   ; Call recording
   ;|100              RECORD          |
   ;|114  Bob Jones                   |

   rule \b\d*\bRECORD\b\d*\b\D*\b
   src_number 1
   src_name 1
   dst_number 2
   dst_name 2
   reason no-answer

   rule \b\d*\bERASE\b\d*\b\w*\b
   reason disconnect
   ```

NetVanta UC Server Configuration

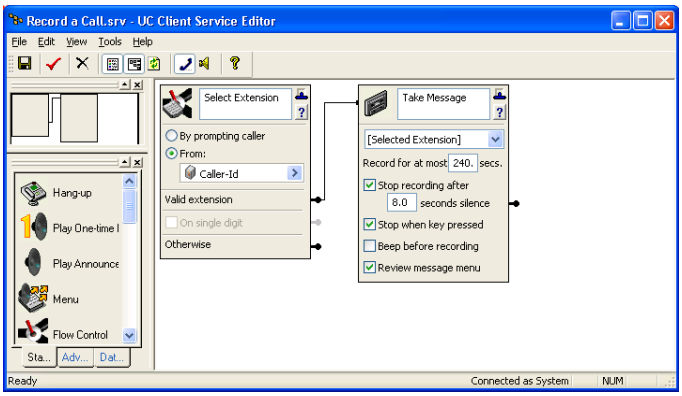
To configure the NetVanta UC Server:

1. Create a service that records a call for the user that requested it.
2. Create an attendant identity that will be used to handle record a call requests.
3. Modify the CallInfoOverrides.cfg file to override interpreted behavior.

4. Restart the UC server application service to apply the CallInfoOverrides.cfg file changes.

Create a Service for Record a Call:

1. Launch the NetVanta UC Client Administrator.
2. Navigate to the Services Pane \ Shared folder.
3. Right-click and select New > Service and rename it “Record a Call.srv”.
4. Create the following service. Ensure that the Select Extension element has the “Caller-ID” system parameter selected.



Create an identity for the Record a Call Service:

1. Launch the NetVanta UC Server Administrator application.
2. Navigate to the Identities Pane.
3. Right-click and select ‘New Identity’.
4. In the wizard pane, do the following:
    - Select Admin as the user profile and create an ‘Attendant service’.
    - Select Next.
5. Enter a name and address. The address must be a unique number that does not conflict with an existing extension on the PBX (e.g. 30000).
6. Select the service that you created in the previous procedure.
7. Select Next.
8. Select Finish.

Modify the CallInfoOverrides.cfg file

The CallInfoOverrides.cfg file defines overrides for general call answering behavior. In the Dialogic Media Gateway configuration you created a specific behavior for Call Recording to send to the UC server as a call forward not answer behavior.

To modify the CallInfoOverrides.cfg file:

1. On the UC server computer, navigate to C:\Program Files\ADTRAN\NetVanta UC Server\Data\System\CallInfoOverrides.cfg.
2. Add an entry with the following content: "R=NoAnswerForward : CS=ExternalDID; S=E; E=30000; R=DirectAnswer"
3. Save the CallInfoOverides.cfg file

Restart the NetVanta UC Server Application Service

Note: Restarting the NetVanta UC Server Application Service temporarily stops answering of automated attendant and voicemail calls.

To restart the application service:

1. Open the services.msc control panel application.
2. Navigate to "NetVanta UC Server Application Services" and select Restart Service.