Mitel 3300 SIP

Requirements

- DuVoice 5.20.040 or above.
- One IP user license per DuVoice port.
- Dialogic HMP.
- MITEL MCD 3300 12.0.2.23-01 or above.

Features

- Message waiting using feature codes.

PBX Configuration

Class of Service Options

Create a class of service for the DuVoice system.

General

General | Advanced

| Class Of Service Number | 5 |
| Comment | DuVoice |

ACD

ACD Agent Behavior on No Answer	Logout
ACD Agent No Answer Timer	15
ACD Make Busy on Login	No
ACD Silent Monitor Accept	No
ACD Silent Monitor Allowed	No
ACD Silent Monitor Notification	No
Follow 2nd Alternate Reroute for Recall to Busy ACD Agent	No
Work Timer	0

Announce

Call Announce Line	No
Off-Hook Voice Announce Allowed	No
Handsfree AnswerBack Allowed	No

Busy Override

Busy Override Security	No
Disable Executive Busy Override Tone	No
Executive Busy Override	No

Call Control Timer

Busy Tone Timer	30
Dialing Conflict Timer	3
First Digit Timer	15
Inter Digit Timer	10
Lockout Timer	45

Call Duration

Call Duration	10
Call Duration Forced Cleardown Timer	0
Enable Call Duration Limit on External Calls	No
Enable Call Duration Limit on Internal Calls	No

- **Comment**
  Enter **DuVoice** or other identifier.
- **Busy Override Security**
  Choose **Yes**.

Call Forwarding/Rerouting

Call Forward - Delay	0
Call Forward No Answer Timer	15
Call Forward Override	No
Call Forwarding (External Destination)	No
Call Forwarding (Internal Destination)	Yes
Call Forwarding Accept	Yes
Call Reroute after CFFM to Busy Destination	No
Call Forwarding Reminder Ring (CFFM and CFIAH only)	No
Disable Call Reroute Chaining On Diversion	No
Group Call Forward Follow Me Accept	No
Group Call Forward Follow Me Allow	No
Third Party Call Forward Follow Me Accept	No
Third Party Call Forward Follow Me Allow	No
Use Held Party Device for Call Re-routing	Yes

Call Hold

Call Hold	Yes
Call Hold - Retrieve with Hold Key	No
Call Hold Remote Retrieve	Yes
Call Hold Timer	30
Local Music On Hold source	No
Music on Hold on Transfer	No
Use Called Party Call Hold Timer	No

Call Park

Call Park Timer	180
Call Park-Allowed To Park	No

Call Pickup

Allow Directed Call Pickup Of Attendant Call	No
Call Pickup Dialed Accept	Yes
Call Pickup Directed Accept	Yes

Call Privacy

Call Privacy	No
Calling Party Name Substitution	No
Name Suppression on outgoing Trunk Call	No
Privacy Released	No
Public Network Identity Provided	No

Call Waiting

Call Waiting Swap	No
ONS CLASS/CLIP: Visual Call Waiting	Yes

Campon

Auto Campon Timer	10
Campon Recall Timer	10

Direct Voice Call

Direct Voice Call - Accept	No
Direct Voice Call - Allow	No
Direct Voice Call - Maximize Volume	No

Display

After Answer Display Time	
Calling Name Display - Internal - ONS	Yes
Calling Number Display - Internal - ONS	Yes
Display ANI/DNIS/ISDN Calling/Called Number	No
Display ANI/ISDN Calling Number Only	No
Display Caller ID on multicall/keylines	No
Display Caller ID On Multicall/Keylines Timer	5
Display Caller ID On Single Line Displays For Forwarded Calls	No
Display Dialed Digits during Outgoing Calls	No
Display DNIS/Called Number Before Digit Modification	No
Display Held Call ID on Transfer	No
Display Transfer Destination on Recall	No
Hot Desk External User - Display Internal Calling ID	No
Maintain Ringing Party During Recall	No
Non-Prime Public Network Identity	No
Originator's Display Update In Call Forwarding/Rerouting	No
Suppress Delivery of Caller ID Display between Sets	No
Suppress Delivery of Caller ID Display between Sets - Override	No

Suppress Delivery of Caller ID Display between Sets - Override	No
Suppress Display Of Account Code Numbers	No
Suppress Redial Display	No

Fax

Campon Tone Security	No
External Trunk Standard Ringback	No
Return Disconnect Tone When Far End Party Clears	No
Fax Capable	No

HCI

HCI/CTI/TAPI Call Control Allowed	Yes
HCI/CTI/TAPI Monitor Allowed	Yes

Hot Desk

Green BLF Lamp for Logged in Hotdesk User	No
Hot Desk External User - Allow Mid-Call Features	Yes
Hot Desk External User - Answer Confirmation	Yes
Hot Desk External User - Dial Tone on Call Complete	Yes
Hot Desk External User - Permanent Login	No
Hot Desk External User - Remote MWI Enable Feature Access Code	
Hot Desk External User - Remote MWI Disable Feature Access Code	
Hot Desk External User - Reseize Timer	180
Hot Desk Login Accept	Yes
Hot Desk Remote Logout Enabled	No

Miscellaneous

Backlighting - Enabled	Yes
Clear All Features Remote	No
Force Device Busy If Any Line In Use	No
Handset Volume Adjustment Saved	No
Head Set Switch Mute	No
Phone Lock	No
Multi-Color LED Support - Disable	No
Timed Reminder Allowed	Yes
User Inactivity Timer	0

Paging

Group Page Accept	No
Group Page Allow	No
Loudspeaker Pager Equivalent Zone Override Security	No
Loudspeaker Pager Override	Yes
Pager Access All Zones	Yes
Pager Access Individual Zones	No

PC Port

PC Port On IP Device - Disable	No

RAD

Answer Plus Delay To Message Timer	20
Answer Plus Expected Off-hook Timer	30
Answer Plus Message Length Timer	10
Answer Plus System Reroute Timer	0
Recorded Announcement Device	No
Recorded Announcement Device - Advanced	No

Ringing

Delay Ring Timer	10
No Answer Recall Timer	17
Ringing Line Select	No
Ringing Timer	180

SMDR

SMDR External	No
SMDR Internal	No

Trunk

ANI/DNIS/ISDN Number Delivery Trunk	No
DASS II OLI/TLI Provided	No
Public Network Access via DPNSS	No
Public Network To Public Network Connection Allowed	No
Public Trunk	No
R2 Call Progress Tone	No
Suppress Simulated CCM after ISDN Progress	No
Trunk Calling Party Identification	Yes
Trunk Flash Allowed	No
Two B-Channel Transfer Allowed	No

Voice Mail

COV/ONS/E&M Voice Mail Port	No
ONS VMail-Delay Dial Tone Timer	5

- **COSV/ONS/E&M Voice Mail Port**
  Choose **Yes**. If this is not done the hunt group type cannot be set to **VoiceMail**.

Advanced

General | **Advanced**

Account Code

Account Code Length	12
Account Code Verified	No
Forced Non-Verified Account Code	No
Forced Verified Account Code	No
Non Verified Account Code	Yes

Attendant

Attendant Busy Out Timer	10
SC1000 Attendant Basic Function Key	No

Conference

Conference Call	Yes
Disable Conference Join Tone	No

DND

Do Not Disturb	Yes
Do Not Disturb - Access to Remote Phones	Yes
Do Not Disturb Permanent	No

Emergency

Emergency Call - Audio Level for Set	Ringer
Emergency Call Notification - Audio	No
Emergency Call Notification - Visual	No

Group Presence

Group Presence Control	No
Group Presence Third Party Control	No

Hotel

Display VIP	No
Hotel Room Monitor Setup Allowed	No
Hotel Room Monitoring Allowed	No
Hotel/Motel Room Personal Wakeup Call Allowed	No
Hotel/Motel Room Remote Wakeup Call Allowed	No

Message Waiting

Message Waiting	Yes
Message Waiting - Disable Ringing Lamp Notification	No
Message Waiting Audible Tone Notification	No
Message Waiting Deactivate On Off-Hook	Yes
Message Waiting Inquire	Yes
Message Waiting Ringing Start Time Hour	
Message Waiting Ringing Start Time Minute	
Message Waiting Ringing Stop Time Hour	
Message Waiting Ringing Stop Time Minute	
Multiline Set Voice Mail Callback Message Erasure Allowed	No
ONS CLASS/CLIP: Message Waiting Activate/Deactivate	No

Miscellaneous

Auto Answer Allowed	Yes
Auto Release on Key Select	No
Brokers Call	No
Called Party Features Override	No
Check COR after PSTN Dial Tone	No
Dialled Night Service	Yes
Disable Send Message	No
Flexible Answer Point	No
Individual Trunk Access	Yes
Key A	
Key B	
Key C	
Key D	
Multiline Set Loop Test	No
Multiline Set Message Center Remote Read Allowed	No
Multiline Set Music	No
Multiline Set On-hook Dialing	Yes
Multiline Set Phonebook Allowed	Yes
Non DID Extension	No
ONS CLASS/CLIP: Set	No
ONS/OPS Internal Ring Cadence for External Callers	No
Override Interconnect Restriction on Transfer	No
Recall If Transferred to Original Call Destination	No
Redial Facilities	Yes

- **Message Waiting**
  Choose **Yes**.
- **Multiline Set On Hook Dialing**
  Choose **Yes**.

Voice Dial Preferred	No
Use Default Billable Number For Trunk Calls	No
Voice Mail Softkey	No

Phonebook

Phonebook Lookup - Default to User Location	No
Phonebook Lookup - Display User Location	No

Record A Call

Record-A-Call - Save Recording on Hang-up	No
Record-A-Call - Start Automatic Incoming Call Recording	No
Record-A-Call - Start Automatic Outgoing External Call Recording	No
Record-A-Call Active	No

Feature Access Codes

By default the DuVoice uses *33 for message waiting set and #33 for message waiting clear. If your system does not use these you will need to change these during the DuVoice installation later.

Message Waiting - Activate	*33
Message Waiting - Deactivate	#33

SIP Device Capabilities

DuVoice does not require any additional settings for operation. It is suggested to choose a specific number for all DuVoice lines in order to reduce conflicts with other SIP devices. The following default configuration can be used as reference.

SIP Device Capabilities

SIP Device Capabilities Number	Comment
1	
2	
3	
4	
5	DuVoice
6	
7	
8	
9	
10	

Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event
Called Party Inward Dialing Modification | Record Information | Advanced

SIP Device Capabilities Number	5
Comment	DuVoice

Call Routing and Administration Options

Outbound Proxy Server	
Replace System based with Device based In-Call Features	Yes
Allow MWI Notifications without Subscription	No
Enable Digit Collection In Busy Or Alerting State	No

SDP Options

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |

| Called Party Inward Dialing Modification | Record Information | Advanced |

Allow Device To Use Multiple Active M-Lines	No
Allow Using UPDATE For Early Media Renegotiation	No
Enable Mitel Proprietary SDP	No
Force sending SDP in initial Invite message	No
Ignore SDP in Unreliable Provisional Responses	No
Limit to one Offer/Answer per INVITE	No
Prevent SDP Renegotiation If Peer Initiated Hold	No
Prevent the Use of IP Address 0.0.0.0 in SDP Messages	No
Renegotiate SDP To Enforce Symmetric Codec	No
Repeat SDP Answer If Duplicate Offer Is Received	No
Send Answer only after renegotiation is complete	No
Suppress Use of SDP Inactive Media Streams	Yes

Signaling and Header Maniputlation

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |

| Called Party Inward Dialing Modification | Record Information | Advanced |

Allow Display Update	No
Disable Reliable Provisional Responses	No
Disable Use of User-Agent and Server Headers	No
Fail REFER To Keep Call Active On Mid-Call Feature	No
If TLS use 'sips:' Scheme	No
Override Auto-Answer Headers	No
Override Auto-Answer Headers With	
Remove Anonymous User	No
Require Reliable Provisional Responses on Outgoing Calls	No
Suppress Redirection Headers	No
Use P-Asserted Identity Header	Yes
Use user=phone	No

Distinctive Ring Tones

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |

| Called Party Inward Dialing Modification | Record Information | Advanced |

Enable Distinctive Ringing	No
Internal Ring	<http://www.notused.com>;info=alert-internal
External Ring	<http://www.notused.com>;info=alert-external
Callback Ring	<http://www.notused.com>;info=alert-community1

Timers

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |
| Called Party Inward Dialing Modification | | Record Information | Advanced | | |

Registration Period Minimum	300
Session Timer	0
Subscription Period	3600
Subscription Period Minimum	300
Subscription Period Refresh (%)	80
Invite Ringing Response Timer	0

Key Press Event

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |
| Called Party Inward Dialing Modification | | Record Information | Advanced | | |

Allow Out Subscriptions for Remote Digit Monitoring	No
Force Out Subscriptions for Remote Digit Monitoring	No

Called Party Inward Dialing Modification

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |
| Called Party Inward Dialing Modification | | Record Information | Advanced | | |

Add Member   Delete Member

Index	Digits to Match	Digit Length Operator	Digit Length	Number of Digits to Absorb	Digits to be Inserted

Record Information

| Basic | SDP Options | Signaling and Header Manipulation | Distinctive Ring Tones | Timers | Key Press Event |
| Called Party Inward Dialing Modification | | Record Information | Advanced | | |

Creator	
Date Created	
Created on MCD Version	
SIP Device	
Vendor Notes	

Advanced

Basic	SDP Options	Signaling and Header Manipulation	Distinctive Ring Tones	Timers	Key Press Event

Called Party Inward Dialing Modification	Record Information	Advanced

Dial Plan

System IP Ports

Verify the IP ports used by the PBX as the following.

System IP Ports

SIP UDP Port	5060
SIP TCP Port	5060
SIP TLS Port	5061

User and Device Configuration

A user must be created for each of the DuVoice lines like the following.

Profile	Device Details	Service Details	Access and Authentication	Phone Applications	Keys

User Profile

Last Name	DuVoice		Role	No Role
First Name			Language	English
Department			Email	
Location	PBX Room		IDS-Manageable	☐

Service Profile

Number	2001		Directory Name	DuVoice
Hot Desking User	☐		Prime Name	◉ No ○ Yes
Device Type	Generic SIP Phone		Privacy	◉ No ○ Yes
Service Level	Full		Home Element	Local_81
Local-only DN	☐		Secondary Element	Not Assigned
ACD Enabled	☐			

- **Last Name**
  Enter a name to identify this user when called. Only devices with displays will see this name.
- **Location**
  Enter a something to identify this users location.
- **IDS-Manageable**
  Uncheck.

- **Number**
Enter the extension number for this line.
- **Device Type**
Choose **Generic SIP Phone**.

Device Details

Service Details

- **Class of Service**
Enter the class of service number you configured for the DuVoice above for all.
- **SIP Device Capabilities**

Enter the number chosen for DuVoice in SIP Device Capabilities.
- **Call Coverage Service Number**
  Set this value to a number not used by other devices.

Access and Authentication

| Profile | Device Details | Service Details | Access and Authentication | Phone Applications | Keys |

Access and Authentication

User PIN	
Confirm User PIN	
SIP Password	••••••
Confirm SIP Password	••••••
Wireless PIN	
Confirm Wireless PIN	
Desktop Admin	☐
Login ID	
Password	
Confirm Password	

- **SIP Password**
  Enter a password.
- **Confirm SIP Password**
  Enter the SIP password.

Keys

| Profile | Device Details | Service Details | Access and Authentication | Phone Applications | Keys |

Copy Keys   Clear All Keys   Clear Key

Button Number	Label	Line Type	URL	Button Directory Number	Ring Type	MiXML Application Feature	Phone Application Feature
2		Not Assigned				Not Assigned	
3		Not Assigned				Not Assigned	

- No configuration necessary.

Hunt Groups

Create a hunt group which includes all the DuVoice user devices created. If the DuVoice user devices

class of service does not have **COSV/ONS/E&M Voice Mail Port** set to **Yes** then they cannot be added to a hunt group who's type is **VoiceMail**.

Hunt Groups						
Hunt Group	**Hunt Group Mode**	**Hunt Group Name**	**Hunt Group Priority**	**Hunt Group Type**	**Home Element**	**Secondary Element**
2000	Terminal		64	VoiceMail	Local_81	Not Assigned

Hunt Group	2000
Local-only DN	False
Hunt Group Mode	Terminal
Hunt Group Name	
Class of Service - Day	
Class of Service - Night1	
Class of Service - Night2	
Home Element	Local_81
Secondary Element	Not Assigned
First RAD	
Second RAD	
Night Answer RAD	
Hunt Group Priority	64
Hunt Group Type	VoiceMail
Phase Timer Ring	

[Add Member] [Change Member] [Delete Member]

Hunt Group Members					
Member Index	**Number**	**Presence**	**Name**	**Home Element**	**Secondary Element**
1	2001	Present	DuVoice	Local_81	
2	2002	Present	DuVoice	Local_81	
3	2003	Present	DuVoice	Local_81	
4	2004	Present	DuVoice	Local_81	

- **Hunt Group Mode**
  Choose **Terminal**.
- **Hunt Group Type**
  Choose **VoiceMail**.

Call Coverage Services

For each guest or staff phone which will be using the DuVoice for VoiceMail a Call Coverage Service must be configured. This field is configured on a per-user setting located on the **Service Details** tab.

General

Call Coverage Services

Call Coverage Service Number	Comment
1	Staff
2	Guest
3	DuVoice

General | IVR | Voice Mail | Post Call Destination

Call Coverage Service Number	3
Comment	DuVoice

- **Comment**
  Give this coverage service a suitable name.

IVR

General | IVR | Voice Mail | Post Call Destination

IVR Number	
PIN Security	No

Voice Mail

General | IVR | Voice Mail | Post Call Destination

Voice Mail Number	2000

- **Voice Mail Number**
  Enter the hunt group created for the DuVoice above.

Post Call Destination

General | IVR | Voice Mail | Post Call Destination

External Calls	No
Internal Calls	No
Post Call Destination	

Call Rerouting

All guest and staff phones using DuVoice for VoiceMail must be configured for Call Routing. This is located under **Advanced Configuration | User and Device Attributes** or under **Call Rerouting**.

Call Rerouting First Alternative

First Alternative Number	Busy / DND DID	Busy / DND TIE	Busy / DND CO	Busy / DND Int	No Answer DID	No Answer TIE	No Answer CO	No Answer Int	Directory Number
1	This	This	This	This	This	This	This	This	2000
2	This	This	This	This	This	This	This	This	2000
3	Normal	Normal	Normal	Normal	Normal	Normal	Normal	Normal	

Call Rerouting First Alternatives

First Alternative Number	2
Busy / DND DID	This
Busy / DND TIE	This
Busy / DND CO	This
Busy / DND Int	This
No Answer DID	This
No Answer TIE	This
No Answer CO	This
No Answer Int	This
Directory Number	2000

- Enter **This** for all combo boxes.
- **Directory Number**
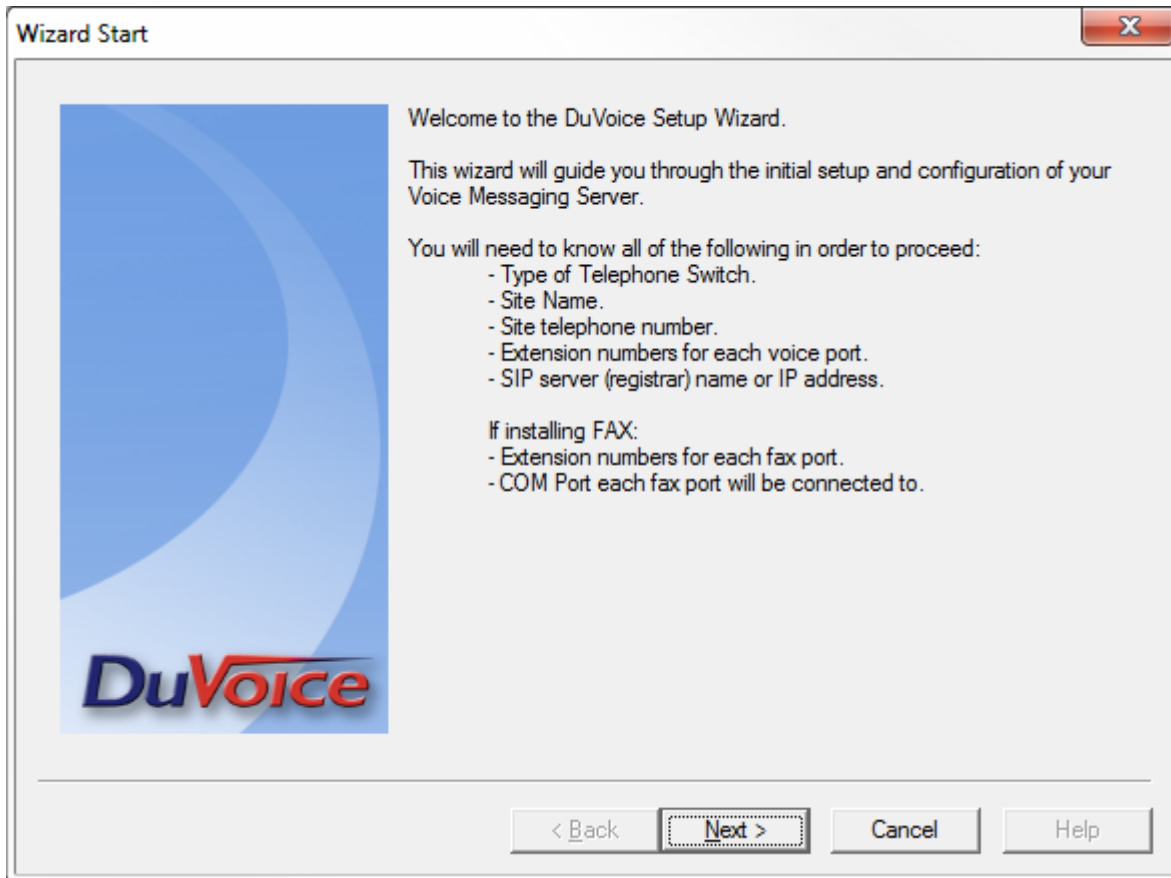 Enter the DuVoice hunt group number.

Call Rerouting

Number	7101
Call Rerouting - Day	2
Call Rerouting - Night1	2
Call Rerouting - Night2	2
Call Rerouting DND Type	All
Call Rerouting - 1st Alt.	2
Call Rerouting - 2nd Alt.	2

- **Call Rerouting - 1st Alt.**
  Set to the associated Call Rerouting First Alternatives.
- **Call Rerouting - 2nd Alt.**
  Set to the associated Call Rerouting Second Alternatives.
- **Call Rerouting - Day**
  Set to the associated Call Rerouting.
- **Call Rerouting - Night1**
  Set to the associated Call Rerouting.
- **Call Rerouting - Night2**
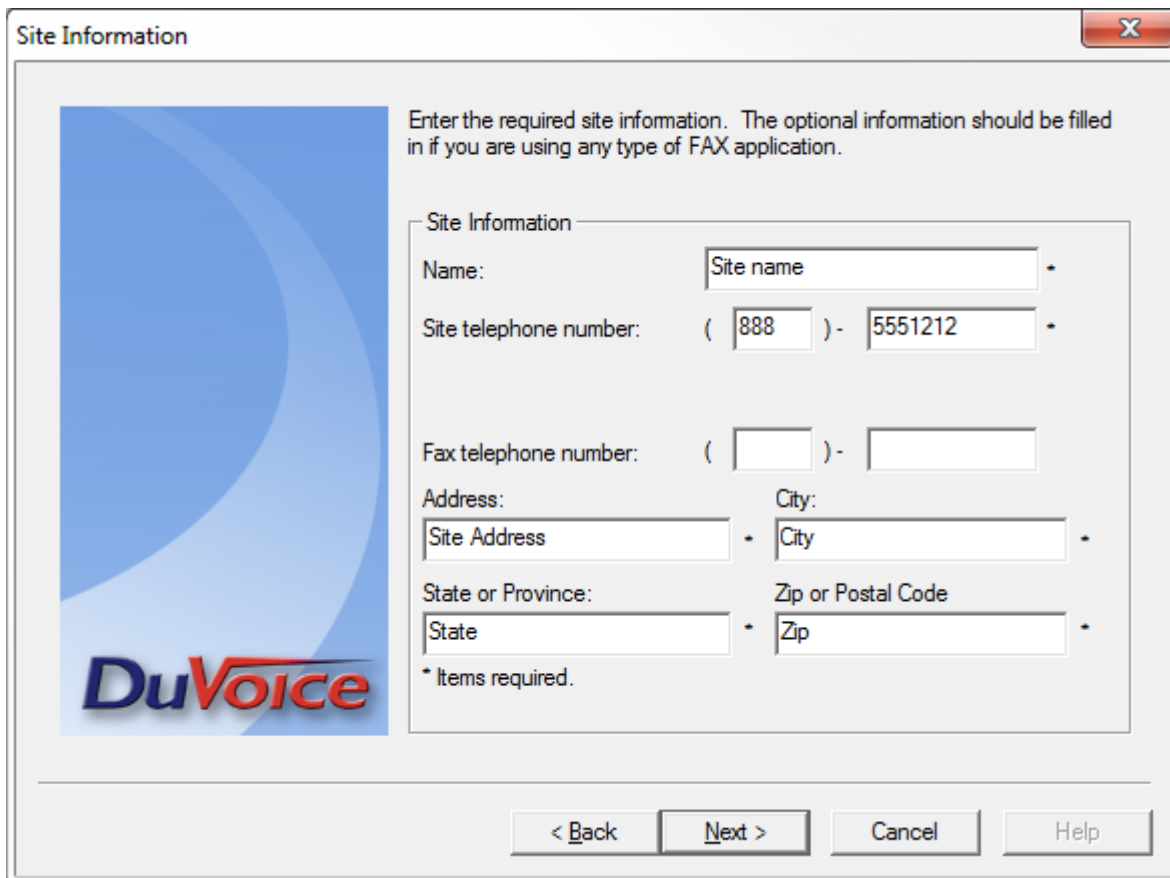 Set to the associated Call Rerouting.

DuVoice Configuration

If your system was purchased from DuVoice you can skip the Installation of Dialogic and the DuVoice software and go directly to Setup Wizard. For Kit installations you must install Dialogic HMP followed by the DuVoice software.

Setup Wizard

- Click **Next**.
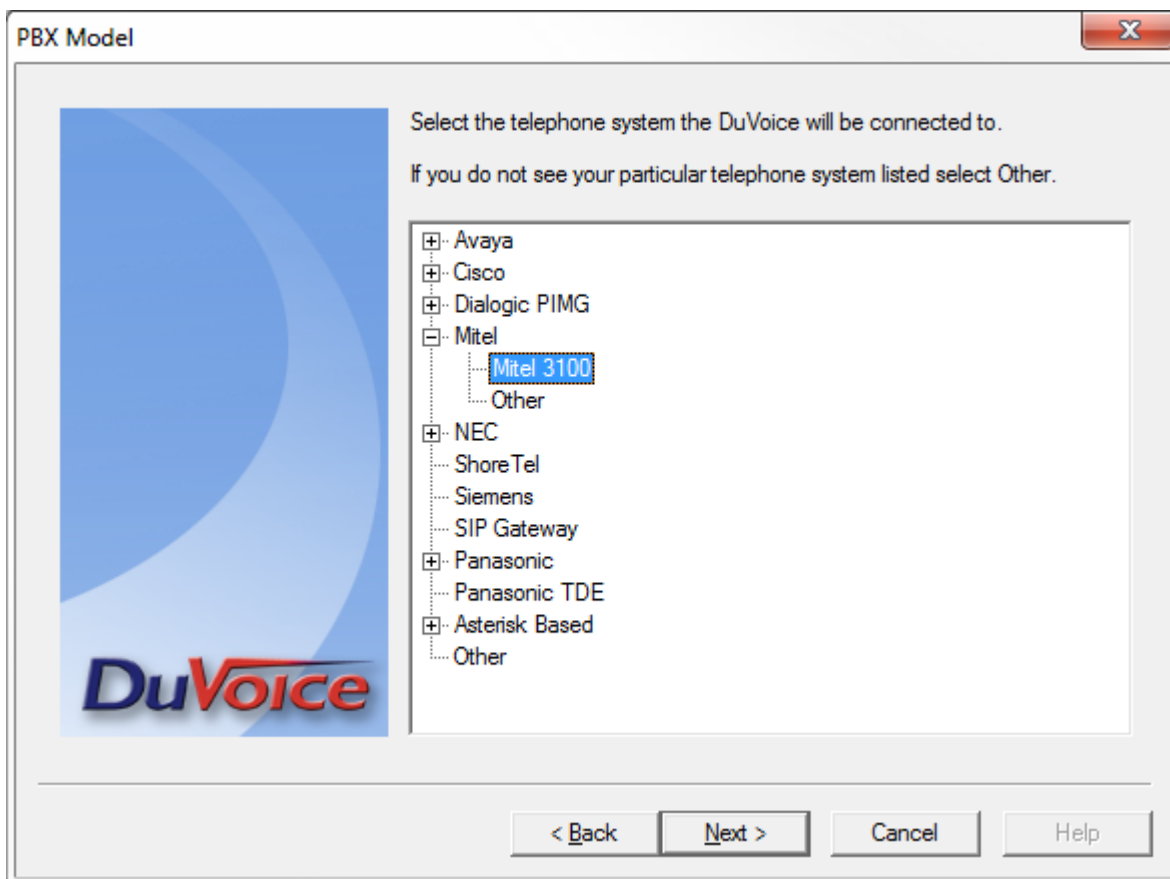
- Fill in all the fields with the site information.
- Click **Next**.

- Select the option which best matches your PBX or Other if your PBX is not listed.
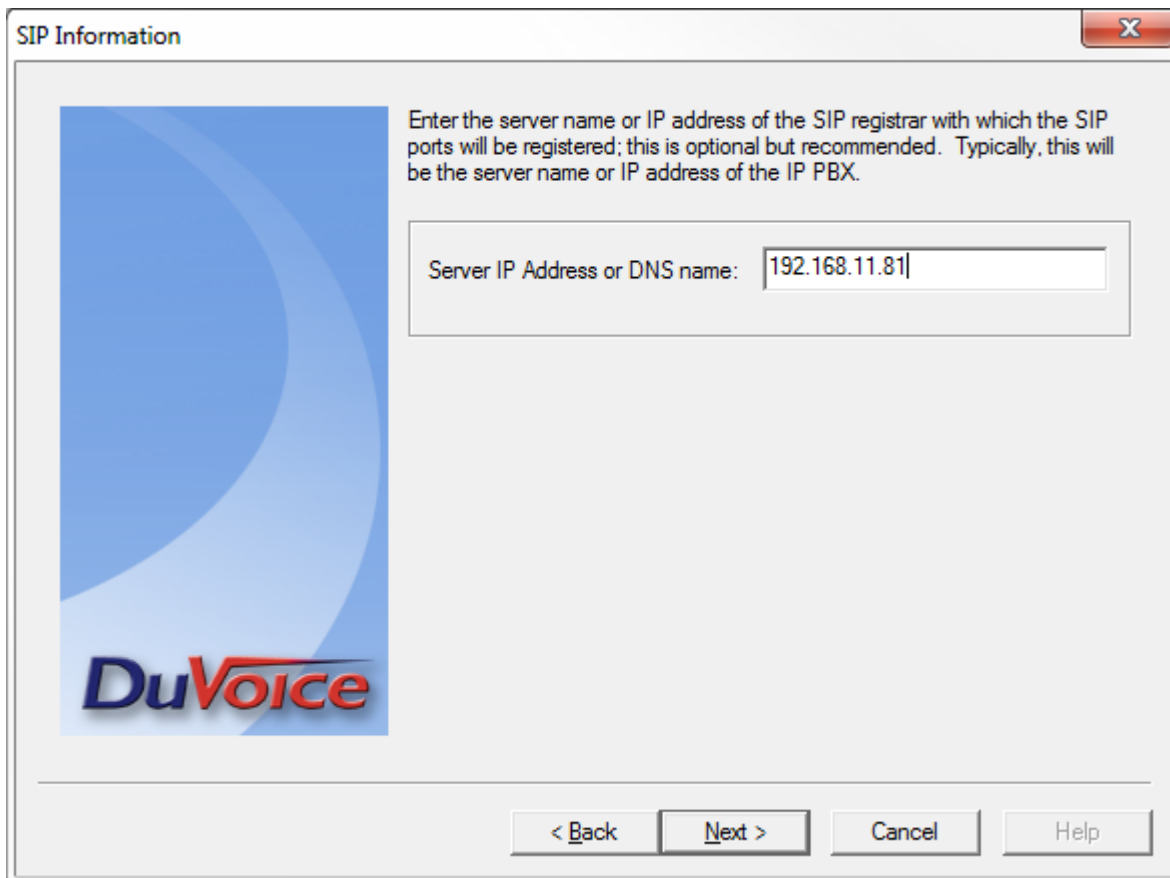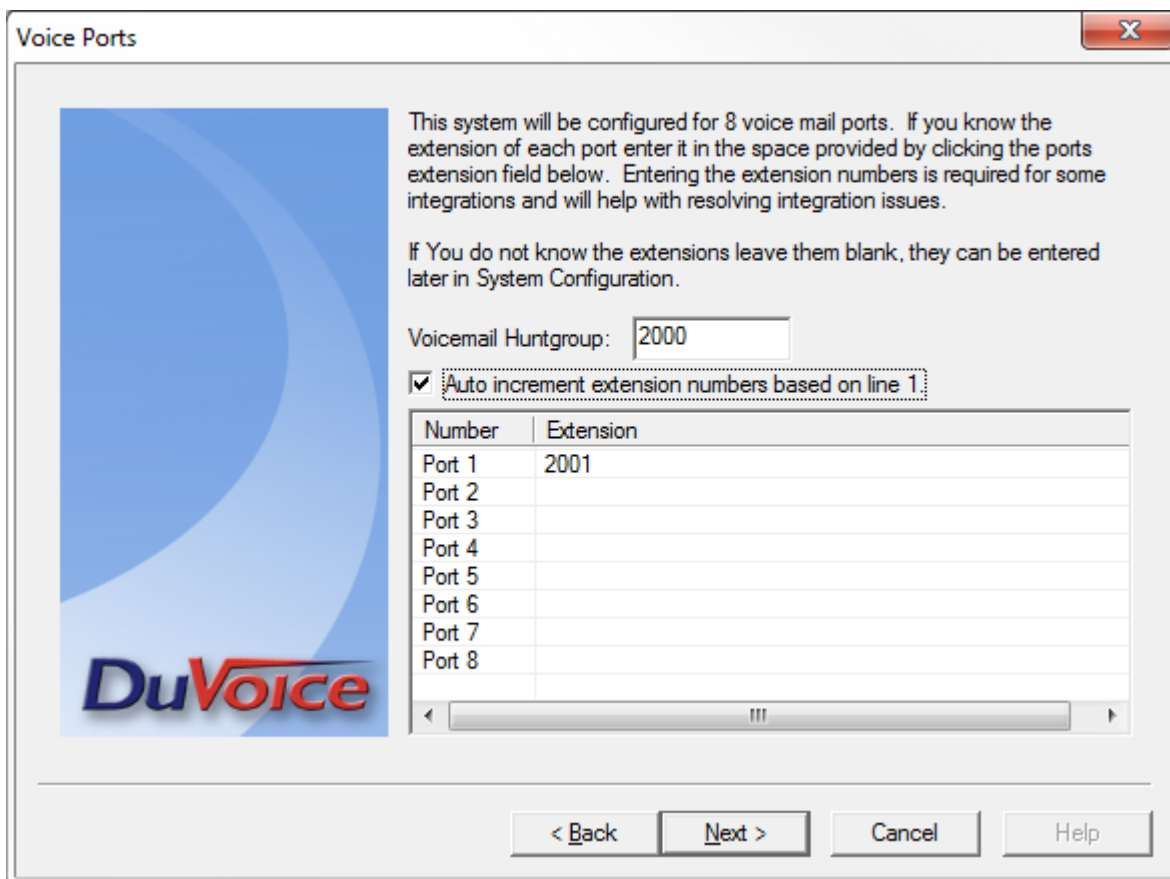
- Click **Next**.
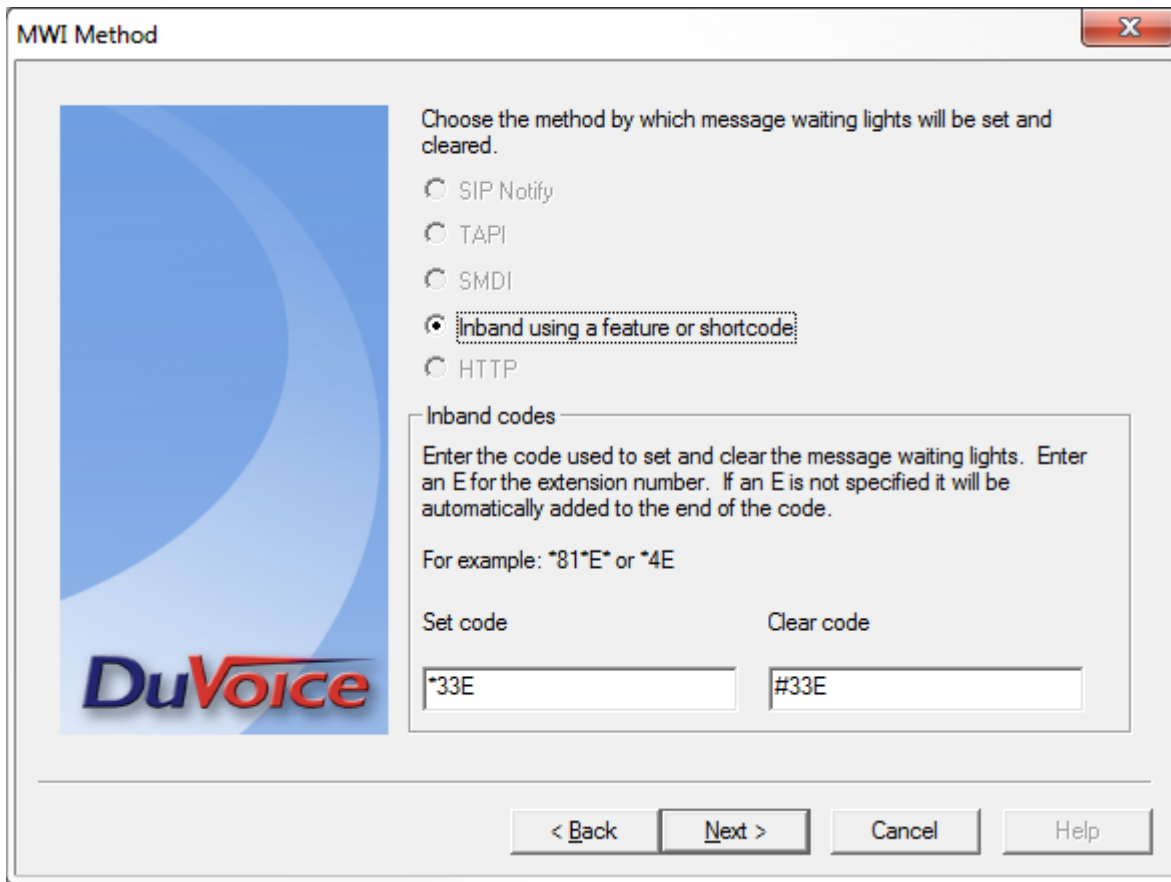
- Unless you have chosen Other as your PBX you will be presented with the choice to configure the default setting for message waiting indicators.
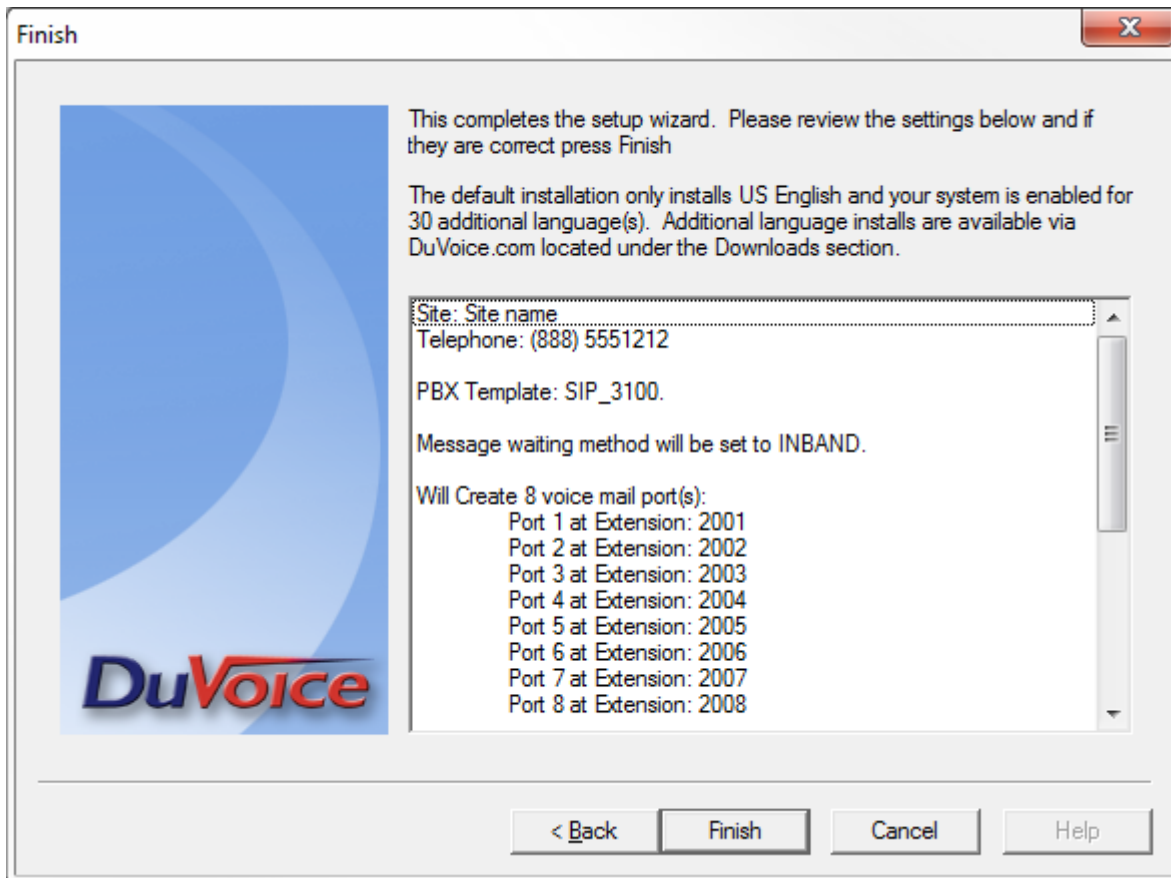- Click **Next**.

- Enter the IP address of your PBX for SIP registration.
- Click **Next**.

- Enter the huntgroup of the DuVoice system you have created in the PBX.

- If all the stations are numerical check **Auto increment extension numbers based on line 1.** and enter the first line number in the space provided. If they are not enter the extension number for each port.
- Click **Next**.

- Click **Finish** if all the setting are correct.

System Configuration

Line Configuration

Each DuVoice line must now be configured register with the MITEL. This is done via System Configuration and double clicking the line you wish to configure. Each line must be configured with it's own individual settings according to the user account created for it.

- **Account name**
  Enter the extension number.
- **Password**
  Enter the password entered on the **Access and Authentication** tab.
- **Realm**
  This is the field **Home Element** located on the **Profile** tab of the user.

Troubleshooting

Registration

Typical trace from WireShark showing a line registration.


```
⊞ Request-Line: REGISTER sip:192.168.11.81 SIP/2.0
⊟ Message Header
  ⊞ From: <sip:2001@192.168.11.81>;tag=41cd268-6564a8c0-13c4-50022-6536-42f08ac7-6536
  ⊞ To: <sip:2001@192.168.11.81>
    Call-ID: a86b78-6564a8c0-13c4-50022-6536-4aa40c99-6536
  ⊞ CSeq: 2 REGISTER
  ⊞ Via: SIP/2.0/UDP 192.168.100.101:5060;branch=z9hG4bK-6536-18b5d70-b25f903
    Max-Forwards: 70
    Supported: replaces
    User-Agent:  DuVoice
    Expires: 3600
  ⊞ [truncated] Authorization: Digest username="2001",realm="Local_81",nonce="t?3<4n]H56AIQ9BuDO'8oFW1omGI]ytYE^>pK~z_$4~[$f<7z>I(w*L;#c%Gl}IC",uri="sip:192.168.11.81"
  ⊞ Contact: <sip:2001@192.168.100.101:5060>
    Content-Length: 0
```

Message Waiting

Typical trace from WireShark showing an Message Waiting indicator On request.

```
Request: INVITE sip:*333101@192.168.11.81 |
Status: 100 Trying |
Status: 401 Unauthorized |
Request: ACK sip:*333101@192.168.11.81 |
Request: INVITE sip:*333101@192.168.11.81 |
Status: 100 Trying |
Status: 180 Ringing |
Status: 200 OK |
Request: ACK sip:*333101@192.168.11.81:5060;transport=udp |
Request: BYE sip:*333101@192.168.11.81:5060;transport=udp |
Status: 200 OK |
```