

The logo for NVM-DFX is presented in a stylized, outlined font. The letters are bold and blocky, with a double-line outline effect. The text is centered within a light gray rectangular background.

**NVM-DFX**

**SMTP Email Integration**

**P/N 1770086**

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This manual has been developed by NEC Unified Solutions, Inc. It is intended for the use of its customers and service personnel, and should be read in its entirety before attempting to install or program the system. Any comments or suggestions for improving this manual would be appreciated. Forward your remarks to:

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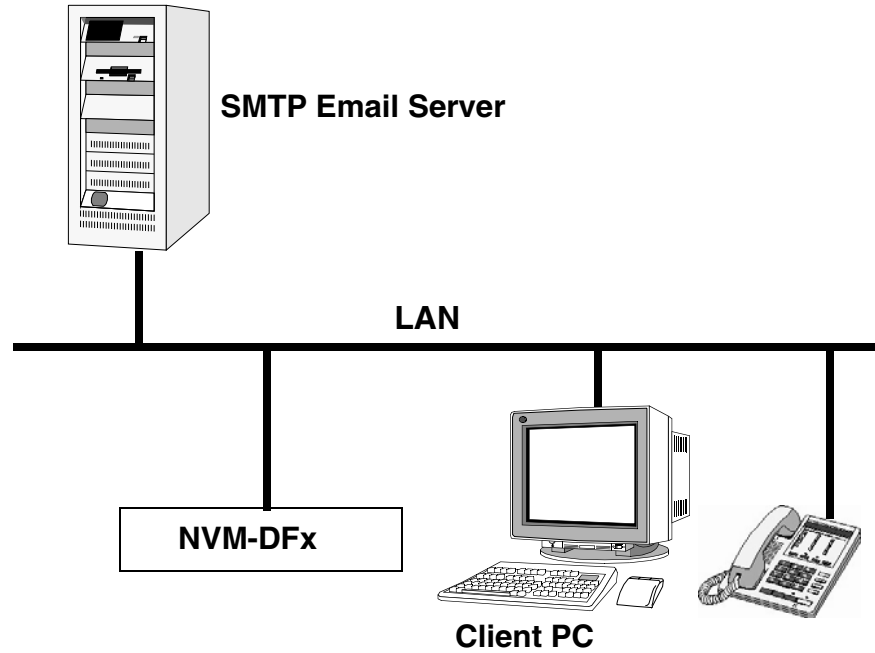
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## Introduction

The NVM-DFx Voice Mail system can be integrated with an SMTP Email Server and can be configured to operate in a POP3 or IMAP4 environment.



**Figure 1-1: Typical Voice Mail/Email Integration**

SMTP integration allows Voice Mail to send Voice and Fax messages to any POP3 or IMAP4 Email client. An incoming Voice Mail or Fax message appears on the SMTP client in the same list as incoming Emails. Email users can read, delete, reply to, and forward Voice and Fax messages that are in their POP3 or IMAP4 account.

Any of the following Email applications can be used as an SMTP client to view messages:

- MS Outlook
- Outlook Express
- Web based - See service provider

When a Voice/Fax message is sent to the POP3 account, and the user deletes or reads the message, it will not be deleted or marked as read in the Voice Mail mailbox. However, if the Voice/Fax message is deleted from the Voice Mail mailbox, an attempt is made to delete it from the POP3 account, provided the user mailbox has POP3 information programmed. If the POP3 mailbox information is left blank, no attempt is made.

# Introduction

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## Compatible Features

Once the Voice Mail unit is integrated with an SMTP Email server, the following features and options can be used:

**Unified Messaging** is the feature that allows Voice, Fax, and Email to be received on the same client PC, using Outlook or other Email application. Each Voice Mail Server is shipped with a default number of Unified Messaging seats. This number can be expanded by purchasing additional seats. All that is required for the default number of Unified Messaging seats to be active, is to perform the SMTP integration.

**Text-to-Speech** copies your Email text messages and converts them to synthesized speech so that you can listen to them through your Subscriber Mailbox at a telephone. A digital voice synthesizer tells you the sender and subject before reading you the actual Email message.

**Synchronization** is a feature of IMAP4 that allows the actions performed at a subscriber mailbox to be repeated at the Email server and vice versa. For instance, if synchronization is enabled and a subscriber deletes a message in his mailbox, the message will also be deleted on the server.

**Unified Messaging Mailbox Options** is a software component that can be installed on the Email client, so that SMTP accounts can be created locally by the client, rather than at the Voice Mail Server.

## Comparison of Integration Types

The table below offers a comparison of the features available for each type of server:

**Table 1: Email Integration Features**

Client Integration	Voice Mail SMTP/POP3	Voice Mail SMTP/IMAP4
Outlook/POP3	Synch NO Forms YES	N/A
Outlook/IMAP4	N/A	Synch YES Forms YES
Outlook Express/POP3	Synch NO Forms NO	N/A
Outlook Express/IMAP4	Synch NO Forms NO	Synch YES Forms NO
Other than Outlook	Synch NO Forms NO	Synch YES Forms NO

## Requirements

- The Voice Mail server must be connected to a network that has access to the Email server, and the Network Configuration must be set to the correct TCP/IP addresses.
- The SMTP Integration software must be installed on the Voice Mail server. If this feature was ordered with the NVM-DFx, the software will already be installed.

## Related Documents

- NVM-DFx System Guide
- NVM-DFx User Guide
- NVM-DFx Unified Messaging

## Programming a Subscriber's Mailbox

Each Subscriber that wants his voice mailbox to be integrated with Email must have his Subscriber mailbox options configured.

- 1) Select **Mailbox Options** from the Customize section of the Voice Mail main menu.
- 2) Using the Number buttons at the top of the screen, indicate the mailbox number of the Subscriber associated with a client PC.
- 3) Click the **Email** tab on the **Mailbox Options** window.

If you have Pop3 Email, the following screen is displayed:

The screenshot shows a configuration window titled "Email" with the following fields and controls:

Email Integration	No	...
Email Integration Send Mode	Voice/Fax	...
Email Name	<input type="text"/>	
Smtp Server	None	
Domain Name	None	
Smtp Port	None	
Smtp SSL	No	...
Smtp Authentication	None	...
Smtp Account	None	
Smtp Password	<input type="password"/>	
Pop3 Server	None	
Pop3 Port	None	
Pop3 SSL	No	...
Pop3 Account	None	
Pop3 Password	<input type="password"/>	
Mailbox Options	<input type="button" value="Apply changes"/>	

**Note** - If the Email server does not support Imap4 and you want to use the Text-To-Speech option, you must be configured for Pop3. Text-To-Speech will request that you leave a copy of the message on the server. Also, there is no synchronization with Pop3.

# Programming a Subscriber's Mailbox

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4) Enter the desired settings in each data field for the following Pop3 Email options:

- **Email Integration** - The Email Integration feature (optional) allows a specific number of Subscribers to be integrated with the Email system. Select **Yes** to enable Email Integration for this Subscriber mailbox.
- **Email Integration Send Mode** - This option allows you to select whether only voice messages, only Fax messages, or both voice and Fax messages will be sent to the subscriber through the SMTP Email integration.
- **Email Name** - The Email address where the voice mail will be received.
- **Smtp Server** - Name or IP Address of the SMTP Server
- **Domain Name** - The SMTP domain name if available. Otherwise, leave this field blank.
- **Smtp Port** - Normally, the port number will be **25**. If a Secure Socket Layer (SSL) is being used, enter **465** as the port number.
- **Smtp SSL** - Secure Socket Layer. If this feature is enabled, make sure that **465** is entered as the port number.
- **Smtp Authentication** - Authentication code (if required by the ISP)
- **Smtp Account** - The Email address for this subscriber, for example - petera@ctlinc.com
- **Smtp Password** - The password that would normally be used to by this subscriber to access his Email
- **Pop3 Server** - Name or IP Address of the SMTP Server
- **Pop3 Port** - Normally, the port number will be **110**. Enter **995** if Secure Socket is being used.
- **Pop3 SSL** - Secure Socket Layer. If this feature is enabled, make sure that **995** is entered as the Pop3 port number.
- **Pop3 Account** - The Email address for this subscriber
- **Pop3 Password** - The password that would normally be used to by this subscriber to access his Email



# Programming a Subscriber's Mailbox

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If you have Imap4 Email, the following screen is displayed:

The screenshot shows a configuration window titled "Email" with the following fields and controls:

- Email Integration: No (dropdown)
- Email Integration Send Mode: Voice/Fax (dropdown)
- Email Integration Sync Mode: All Folders (dropdown)
- Email Name: (text input)
- SmtP Server: None (text input)
- Domain Name: None (text input)
- SmtP Port: None (text input)
- SmtP SSL: No (dropdown)
- SmtP Authentication: None (dropdown)
- SmtP Account: None (text input)
- SmtP Password: (text input)
- Imap4 Server: None (text input)
- Imap4 Port: None (text input)
- Imap4 SSL: No (dropdown)
- Imap4 Account: None (text input)
- Imap4 Password: (text input)
- Imap4 Authentication: Plain (dropdown)
- Imap4 Search Mode: Header (dropdown)
- Mailbox Options: Apply changes (button)

5) Enter the desired settings in each data field for the following Imap4 Email options:

- **Email Integration** - The Email Integration feature (optional) allows a specific number of Subscribers to be integrated with the Email system. Select **Yes** to enable Email Integration for this Subscriber mailbox.
- **Email Integration Send Mode** - This option allows you to select whether only voice messages, only Fax messages, or both voice and Fax messages will be sent to this mailbox.
- **Email Integration Sync Mode** - This option specifies the synchronization mode used by Imap4 to get Email. The available options are **All Folders**, **Inbox Only**, **VM Folder Only**, and **None**.

If you don't create a folder called "Voice Mail Messages", Voice Mail will create one for you. This is where Voice Mail will look for voice and fax messages during synchronization. It is up to the end user (client) to set up a rule in Outlook (Tools/Outlook Rules) so that messages are automatically sent to this folder.

# Programming a Subscriber's Mailbox

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- **Email Name** - The Email address where the voice mail will be received.
  - **Smtp Server** - Name or IP Address of the SMTP Server
  - **Domain Name** - The SMTP domain name if available. Otherwise, leave this field blank.
  - **Smtp Port** - Normally, the port number will be **25**. If a Secure Socket Layer (SSL) is being used, enter **465** as the port number.
  - **Smtp SSL** - Secure Socket Layer. If this feature is enabled, make sure that **465** is entered as the port number.
  - **Smtp Authentication** - Authentication code (if required by the ISP)
  - **Smtp Account** - The Email address for this subscriber, for example - petera@ctlinc.com
  - **Smtp Password** - The password that would normally be used to by this subscriber to access his Email
  - **Imap4 Server** - Name or IP Address of the SMTP Server
  - **Imap4 Port** - Normally, the port number will be **143**.
  - **Imap4 SSL** - N/A
  - **Imap4 Account** - The Email address for this subscriber
  - **Imap4 Password** - The password that would normally be used to by this subscriber to access his Email
  - **Imap4 Authentication** - Authentication code (if required by the ISP)
  - **Imap4 Search Mode** - The Client PC periodically polls the Email server during the synchronization process. This is done, for example, to make sure that the same message is deleted from the Email server when it is deleted from the Client PC. This field determines whether the Email is searched for by **Header** or **Text**.
- 6) When you are done editing the Email Options for this Subscriber mailbox, click the **Apply changes** button.
- 7) Repeat the steps above for each Subscriber mailbox that you want to integrate with the Email server.

## Changing the SMTP Configuration

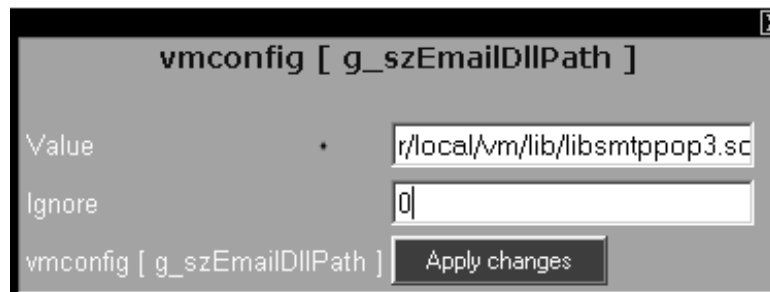
Normally, the default configuration of the NVM-DFx is for Imap4. If your Email server does not support this, and you need to use the Text-To Speech option, you can change the SMTP configuration.

### To change the SMTP configuration from Imap4 to Pop3:

1) Select **Misc Setup** from the **Tools** section of the main menu:

Option	Value	Ignore
MaxTraceFileSize	1000000	1
NSLTraceModeOn	0	1
NSL_InSkinType	0	1
TraceLevelOverride	False	1
g_bAllowNSL	False	1
g_bEnableSendMsgAsAttachment	True	1
g_bImap4SyncPendingTimer	20	1
g_bUseAmis	True	1
g_bUseDesktopMessaging	True	1
g_bUseEmailIntegration	True	1
g_bUseTTS	False	1
g_nNetServiceNumber	2000	1
g_nRepeatStartUpPeriod	5	1
g_szEmailDllPath	/usr/local/vm/lib/libsmtpimap4.so	1

2) Locate the option **g\_szEmailDllPath** and click on the digit in the Ignore column. This will display a dialog box which will allow you to edit the value for this option:



3) In the **Value** field, replace "imap4" with "pop3" by writing over.

4) Make sure that the **Ignore** digit is set to "0".

5) Click the **Apply changes** button. The new value for the Email option should now be displayed as "/usr/local/vm/lib/libsmtp3.so"

# SMTP - Simple Mail Transport Protocol

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## SMTP - Simple Mail Transport Protocol

SMTP (Simple Mail Transfer Protocol) is a TCP/IP protocol used in sending Email. SMTP uses a *spooled* or *queued* method of mail delivery. Once a message has been sent to a destination, the message is spooled to a device, usually a disk. However, since it is limited in its ability to queue messages at the receiving end, it is usually used with one of two other protocols, POP3 or IMAP, that lets the user save messages in a server mailbox and download them periodically from the server. Typically, a program that uses SMTP sends messages from a mail client to a mail server and a program using either POP3 or IMAP retrieves messages from the server to an Email client. Microsoft Exchange includes an SMTP server and can also be set up to include POP3 support.

POP3 (Post Office Protocol 3) is the most recent version of a standard protocol for receiving Email. POP3 is a client/server protocol in which Email is received and held in a single mailbox on the server. Periodically, the client Email receiver checks the mailbox on the server and downloads any mail. POP3 can be thought of as a "store-and-forward" service. POP3 is designed to delete mail on the server as soon as the user has downloaded it. However, some implementations allow users or an administrator to specify that mail be saved for some period of time. The POP3 protocol is built into most popular Email products, such as Eudora and Outlook Express. It's also built into the Netscape and Microsoft Internet Explorer browsers.

The IMAP (Internet Message Access Protocol) is an alternative protocol for accessing Email from your local server. IMAP represents an improvement over POP by allowing a client to access and manipulate Email messages on a server such as retaining messages and organizing them in folders. IMAP4 is a client/server protocol in which Email is received and held by the server. IMAP can be thought of as a "remote file server". The Email client can view just the heading and the sender of the letter and then decide whether to download the mail. You can also create and manipulate multiple folders or mailboxes on the server, delete messages, or search for certain parts or an entire note. IMAP requires continual access to the server during the time that you are working with your mail.

# SMTP - Simple Mail Transport Protocol

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## SMTP Sequence

SMTP commands are ASCII strings terminated by a CRLF combination. Here is how a typical SMTP connection works:

The client has responsibility for delivering a message to one or more envelope recipients, or notifying an envelope sender if delivery is not made. It wants to transfer this responsibility to the server.

The client waits for the server's greeting:

```
220 heaven.af.mil ESMTP
```

If the server does not accept the connection, the client quits.

The client then sends a HELO request, and waits for the response:

```
HELO sun.af.mil
```

```
250 heaven.af.mil
```

If the server does not accept the request, the client quits.

The client then sends a MAIL request showing the envelope sender address, and waits for the response:

```
MAIL FROM:<driver@sun.af.mil>
```

```
250 ok
```

If the server does not accept the request, the client quits.

The client then sends one RCPT request for each envelope recipient address, waiting for a response after each address:

```
RCPT TO:<God@heaven.af.mil>
```

```
250 ok
```

It keeps track of which addresses are accepted. If none of the addresses are accepted, the client quits.

The client then sends a DATA request, and waits for the response:

```
DATA
```

```
354 go ahead
```

If the server does not accept the request, the client quits.

The client then sends the encoded message, waits for the response, and quits:

```
Date: 8 Aug 1998 04:10:45 -0000
```

```
From: driver@sun.af.mil
```

```
To: God@heaven.af.mil
```

```
Subject: chariot is back in service
```

```
I patched up the wheel. It's as good as new.
```

```
250 ok 902549473 qp 24035
```

```
.
```

```
QUIT
```

```
221 heaven.af.mil
```

If the client encounters a message I/O error, it closes the connection immediately, without sending a final dot and without sending a QUIT request.

# SMTP - Simple Mail Transport Protocol

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For each recipient, the client decides whether responsibility was transferred to the server. There are three possible results:

Success: The server accepted responsibility for this recipient. The client is no longer responsible.

Deferral: The server temporarily rejected responsibility for this recipient. The client will try again later.

Failure: The server permanently rejected responsibility for this recipient. The client will notify the sender.

This result is determined by the first digit of the server's response codes for the connection (C), the HELO request (H), the MAIL request (M), the RCPT request for this recipient (R), the DATA request (D), and the encoded message (E), according to the following table:

<u>C H M R D E</u>	<u>Result</u>
5	deferral (some clients: failure)
4	deferral
2 5	deferral (some clients: failure)
2 4	deferral
2 2 5	failure (a few clients: deferral)
2 2 4	deferral
2 2 2 5	failure
2 2 2 4	deferral
2 2 2 2 5	failure
2 2 2 2 4	deferral
2 2 2 2 3 5	failure
2 2 2 2 3 4	deferral
2 2 2 2 3 2	success

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Customer Service FAX: .....203-926-5454  
Technical Service: .....203-925-8801  
Discontinued Product Service: .....900-990-2541  
Technical Training: .....203-926-5430  
Emergency Technical Service (After Hours) .....203-929-7920  
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