



# SMTP Deux

## Developer Documentation v1.0.0b02

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# Table of Contents

Items in **Bold** were just added in the latest release of the SMTP Deux component.  
Items in *Italic* have not had their content filled in completely as of yet.  
Items in Underline have had important updates since the last release of the SMTP Deux component.

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Table of Contents

Preface

*About this Manual*

Acknowledgements

*Features*

System Requirements

Support

Components

*Compatibility Matrix*

Installing and Updating SMTP Deux

Managing Installation Conflicts

Affix SMTP Deux Document

Uninstalling SMTP Deux

*Basics of SMTP*

*Mail Header Lines*

*Formatted Recipients*

*Recipients Versus Header Lines*

*Formatted Attachments*

*Content Types*

Constants

SMTPd\_Header\_Codes

*Methods*

INIT\_SMTPd

SMTPd\_ERROR

**SMTPd\_Extract\_EmailAddress**

**SMTPd\_Extract\_FullName**

SMTPd\_Get\_Attachment\_w\_Header

SMTPd\_Get\_Recipient\_Formatted

SMTPd\_Send\_Message\_Attachment

SMTPd\_Send\_Message\_Complex

SMTPd\_Send\_Message\_Simple

Version History

**SMTP Deux v1.0.0b02**

SMTP Deux v1.0.0b01

*Using SMTP Deux*  
*SMTP Deux Error Codes*  
*Index*

# Preface

The SMTP Deux component is designed to work in conjunction with many other components. Specifically, the SMTP Deux component requires that the BASH component, available for free from DSTi, and TCP Deux component both be installed already in your database structure file.

Make certain that you view the compatibility matrix for components available to make certain you are using compatible versions of the different components required. There is a compatibility matrix available in this manual; the most recent compatibility matrix is available on the DSTi web site.

## About this Manual

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# Acknowledgements

The creation of the SMTP Deux component is not directly attributable to any single person. Particular pieces of functionality within the SMTP Deux component may be from the direct knowledge and experience of certain developers, but the overall concept and construction of the SMTP Deux component has come from all of the developers at Deep Sky Technologies, Inc.

In particular, the tireless efforts of Robert T. McGoye have contributed the most to the SMTP Deux component. His ability, and patience, to be able to tolerate the swings in the atmosphere at DSTi, have proven to be invaluable in the development of the SMTP Deux component.

Later tweaks and additions to the SMTP Deux component have resulted from the training of James T. Crate. Mr. Crate's experience in many different programming environments has provided refreshing insights into the overall structure and organization of the core routines at DSTi, the same core routines which are available in the BASH and SMTP Deux components.

Finally, I, Steven G. Willis, might have had something to do with the creation of the SMTP Deux component...



# Features

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# System Requirements

The SMTP Deux component is compatible with both Macintosh and Windows installations of 4th Dimension.

Since it is a component, it does require at least version 6.7 of 4th Dimension or above, including 4D Insider v6.7 or above for installation.

Other than the normal hardware and software requirements for your version of 4th Dimension, there are no other minimum requirements for proper use of this software.

# Support

Support is provided for SMTP Deux component free of charge for all currently licensed users. Included support services provided for all currently licensed users encompasses all of the online support services available through the DSTi web site (email, FAQ, messaging, etc.). Check the DSTi web site for current direct support options available; we are always working to offer more resources for your needs.

Contact information, including email address(es), phone number(s), and a Contact Us request form, for Deep Sky Technologies, Inc., can be found on the DSTi web site located at:

<http://www.deepskytech.com/>

If there are terms or conventions which you find difficult to understand in relation to the SMTP Deux component or TCP networks in general, feel free to contact Deep Sky Technologies, Inc., support. We will be more than happy to help you in any way we reasonably can. And, only through your questions do we know what subjects to include in future versions of this manual.



# Components

A component groups various 4D objects (tables, project methods, forms, menu bars, variables, etc.) representing one or more additional functions. Developing a 4D component providing electronic mail functionality is one such example. A component is autonomous and must be able to be installed in any 4D structure.

Components are defined, generated, and installed with the help of 4D Insider. The component definition is based on the cross referencing analysis performed by 4D Insider (target objects and source objects).

Unlike libraries and groups, components embed the idea of security of objects that they compose. During the development phase of the component, each object is attributed an access type, "Public", "Protected" or "Private". This attribute determines whether each object will be visible or modifiable in 4th Dimension and in 4D Insider once the component is installed within a 4D database.

# Compatibility Matrix

asd

# Installing and Updating SMTP Deux

Installing SMTP Deux or updating an existing version of SMTP Deux within a 4D database is performed using 4D Insider. The activity primarily consists of installing the SMTP Deux component in a database structure opened with 4D Insider (installing the TCP Deux component in a library is not supported at this time).

4D Insider will manage possible conflict issues within the installation and will inform you as they are detected. Though, with the naming conventions used within the SMTP Deux component and the limited number of object names, conflicts should be very rare.

To install or update the SMTP Deux component, follow these very simple steps:

**Open the uncompiled structure that you wish to install SMTP Deux into using 4D Insider.**

**Choose the "Install/Update..." command in the "Components" menu.**

A standard open file dialog box will appear.

**Select the SMTP Deux component file and click on the "Open" button.**

4D Insider parses the SMTP Deux component and prepares to integrate it with your open database. 4D Insider will detect if the operation is an installation or an update of the SMTP Deux component.

In the event of a new installation, all SMTP Deux objects are installed.

In the event of an update, 4D Insider compares the version numbers of both the currently installing SMTP Deux component and the already installed SMTP Deux component. If the date of the "new" component is older than the already installed component, a dialog box will

alert you, allowing you to then "Continue" or "Cancel" the update.

4D Insider replaces old objects with newer objects within the SMTP Deux component and adds new objects from the new SMTP Deux component. 4D Insider takes into account "public" objects having been modified by you (e.g. "\_ERROR" methods) and will prompt you to either save or replace them. If any other conflicts arise from the installation or update of the SMTP Deux component, 4D Insider will prompt you with an appropriate dialog box.

**Save the database in 4D Insider.**

**Place a copy of the Affix SMTP Deux document in the 4DX folder.**

The Affix SMTP Deux document (entitled **Affix\_SMTp\_Deux** on Macintosh) contains essential data, resources and constants for many of the methods within the SMTP Deux component. For many of the methods within the SMTP Deux component to function properly, the Affix SMTP Deux document must be in the 4DX folder for the current structure.

On Macintosh, the Affix SMTP Deux document is entitled **Affix\_SMTp\_Deux** and is located in the Mac4DX directory in the SMTP Deux component's archive. The document should be copied into the Mac4DX folder of your current structure. If the SMTP Deux component is going to be used in all of your 4D projects, the Affix SMTP Deux document can instead be placed within the Mac4DX folder within the 4D folder of your system.

On Windows, the Affix SMTP Deux document is actually two documents: **Afx\_SMTpD.4DX** and **Afx\_SMTpD.RSR**. These two documents correspond to the data fork and the resource fork of the Affix SMTP Deux document used on Macintosh. These documents are located in the Win4DX directory in the SMTP Deux component's archive. These documents should be copied into the Win4DX folder of your current structure. If the SMTP Deux component is

going to be used in all of your 4D projects, the Affix SMTP Deux document can instead be placed within the Win4DX folder within the 4D folder of your system.

For client/server installations in cross-platform environments, both the Macintosh and Windows versions of the Affix SMTP Deux document should be installed.

**Call the method *INIT\_SMTPd* early in the On Startup database method.**

To initialize the SMTP Deux component in your code, place a call to the method *INIT\_SMTPd* early in your **On Startup** database method.

Details about the *INIT\_SMTPd* method can be found in the method documentation section of this manual, below.

The SMTP Deux component is now installed/updated in your database and is listed on the "Components" page of the 4D Explorer.

## Managing Installation Conflicts

On very rare occasions, when the SMTP Deux component is installed or updated in your 4D database, several questions and conflicts may arise. In the event of an update, 4D Insider will detect that you have modified one of more "Public" objects in SMTP Deux after the initial installation. Or, one or more objects of the same type and of the same name may already exist in your database and in the SMTP Deux component.

4D Insider detects and solves these conflicts during installation:

### Modified public objects (updates only)

In this case, 4D Insider alerts you by a dialog box, allowing you to choose an update mode:

Replace the object

Replace all objects

Do not replace the object

Stop installation

## **Name conflicts**

In this case, 4D Insider stops the SMTP Deux installation process, alerts you through a dialog box and saves the list of objects in conflict. This list is stored as a text file in the 4D database folder.

Naming conflicts between logical objects, such as variables, are managed by 4D Insider, in a manner that allows database compilation and avoids conflicts between SMTP Deux and other 4D components.

It may be necessary to rename certain objects in your database or in other components in order to be able to install the SMTP Deux .

If any naming conflicts do occur between SMTP Deux and other 4D components, please notify Deep Sky Technologies, Inc., immediately.

## **Affix SMTP Deux Document**

The Affix SMTP Deux document (entitled **Affix\_SMTP\_Deux** on Macintosh) contains essential data and resources for many of the methods within the SMTP Deux component. For many of the methods within the SMTP Deux component to function properly, the Affix SMTP Deux document must be in the 4DX folder for the current structure. For distributed and installed versions of your 4D projects, the Affix SMTP Deux document must be available in the 4DX folder for the SMTP Deux methods to continue to function properly.

**Note:** it is best to consider the Affix SMTP Deux document another plug-in within your 4D project. Though there no actual plug-in calls available within the Affix SMTP Deux document, it does contain data and resources essential to the operation of the SMTP Deux methods. The SMTP Deux component has been designed to find the Affix SMTP Deux document correctly in all environments (any platform, any 4DX folder, single user or clients/server, etc.). Since the Affix SMTP Deux document is configured similarly to plug-ins, 4D and the SMTP Deux component will automatically manage the document for you in all of the possible installations of a 4D project.

# Uninstalling SMTP Deux

4D Insider allows you to uninstall the SMTP Deux component from your 4D database.

To uninstall SMTP Deux from your 4D database:

Using 4D Insider, open your database containing the copy of SMTP Deux to be uninstalled.

In the "Main" listing window, select the SMTP Deux component.

Consider again how great the SMTP Deux component is and make certain that you will *really* no longer need it in your 4D database.

Select the "Uninstall..." command in the "Components" menu.

This command is only active when a component is installed in the database. A dialog box appears allowing you to confirm or cancel the operation. If you uncertain about the previous step then the cancel option is probably your best choice at this time.

Click "OK" to validate the operation.

Remove the Affix SMTP Deux document and internet connectivity plugins from your 4DX folder.

Remove the call to the method *INIT\_SMTPd* from your On Startup database method.

All objects from the SMTP Deux component are deleted from your 4D database. Obviously, you are now very sad to no longer have the SMTP Deux component in your 4D database. Crying is allowed...



# Basics of SMTP

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## Mail Header Lines

asd

## Formatted Recipients

asd

## Recipients Versus Header Lines

asd

## Attachments

asd

# Content Types

asd



# Constants

There are a minimal number of custom constants included with the SMTP Deux component package. These constants are grouped into a single, convenient constant groups for easier referencing and organization.

Where appropriate, it is highly recommended that the custom constants included with the SMTP Deux component be utilized within your code; this will simplify considerably future feature enhancements to the core code within SMTP Deux.

## SMTPd\_Header\_Codes

The SMTPd\_Header\_Codes constants group contains one constant for each of the common SMTP header lines tags supported within the SMTP Deux component package. The following is a listing of the constants, their values, and the text of the actual header line in email corresponding to each, within the SMTPd\_Header\_Codes constant group:

| <u>Constant</u>            | <u>Value</u> | <u>Text of Header Line</u> |
|----------------------------|--------------|----------------------------|
| SMTPd_FROM_Type            | 1            | From                       |
| SMTPd_TO_Type              | 2            | To                         |
| SMTPd_CC_Type              | 3            | CC                         |
| SMTPd_BCC_Type             | 4            | BCC                        |
| SMTPd_Reply_To_Type        | 5            | Reply-To                   |
| SMTPd_Sender_Type          | 6            | Sender                     |
| SMTPd_Resent_Reply_To_Type | 7            | Resent-Reply-To            |
| SMTPd_Resent_From_Type     | 8            | Resent-From                |
| SMTPd_Resent_Sender_Type   | 9            | Resent-Sender              |
| SMTPd_Orig_Date_Type       | 10           | Orig-Date                  |
| SMTPd_Date_Type            | 11           | Date                       |
| SMTPd_Resent_Date_Type     | 12           | Resent-Date                |
| SMTPd_Resent_To_Type       | 13           | Resent-To                  |
| SMTPd_Resent_CC_Type       | 14           | Resent-CC                  |
| SMTPd_Resent_BCC_Type      | 15           | Resent-BCC                 |
| SMTPd_In_Reply_To_Type     | 16           | In-Reply-To                |
| SMTPd_References_Type      | 17           | References                 |
| SMTPd_Keywords_Type        | 18           | Keywords                   |
| SMTPd_Subject_Type         | 19           | Subject                    |
| SMTPd_Comments_Type        | 20           | Comments                   |
| SMTPd_Encrypted_Type       | 21           | Encrypted                  |
| SMTPd_Mime_Ver_Type        | 22           | Mime-Version               |
| SMTPd_Content_Type_Type    | 23           | Content-Type               |
| SMTPd_X_Mailer_Type        | 24           | X-Mailer                   |

In general, these constants will probably not be used within your coding with the SMTP Deux component. The only exception to this is if you use the SMTPd method ***SMTPd\_Send\_Message\_Complex*** in which case you will be using these values directly.



# Methods

asd



## INIT\_SMTPd

**INIT\_SMTPd**

**INIT\_SMTPd**

| Parameter   | Type        | Description |
|-------------|-------------|-------------|
| <i>none</i> | <b>none</b> | <b>none</b> |

The method **INIT\_SMTPd** initialises the SMTP Deux component. A single call to this method should be made early in the On Startup database method in your 4D application. Make certain the call to this method follows the initialization call to the BASH and TCP Deux components but before any other calls to the SMTP Deux component package.



## SMTPd\_ERROR

**SMTPd\_ERROR** ( *SMTPd Error Number ; Special Error Text ; Calling Method Name* )

**SMTPd\_ERROR**

(  
    -> *SMTPd Error Number*: **Longint**  
    -> *Special Error Text*: **Text**  
    -> *Calling Method Name*: **Text**  
)

| Parameter                 | Type           | Description                                       |
|---------------------------|----------------|---|
| <i>SMTPd Error Number</i> | <b>Longint</b> | Internal SMTPd error number                       |
| <i>Special Error Text</i> | <b>Text</b>    | Special text to describe the exact error instance |

|                            |             |  |
|----------------------------|-------------|--|
| <i>Calling Method Name</i> | <i>Text</i> | <i>Name of the method that the error condition occurred in</i> |
|----------------------------|-------------|--|

The method ***SMTPd\_ERROR*** acts as a callback method from within the SMTP Deux component for errors that may occur. Any time an error condition is detected within the SMTP Deux, a call to the method ***SMTPd\_ERROR*** is made.

The internal *SMTPd Error Number* is passed to this method as the first parameter. The *Special Error Text* parameter will contain any relevant error text which is specific to the error which occurred. It is not uncommon for the *Special Error Text* value to be empty. The *Calling Method Name* will always contain the name of the SMTP Deux method which called the ***SMTPd\_ERROR*** method.

The ***SMTPd\_ERROR*** method has been implemented as a source for a consistent interface and/or error tracking mechanism to be available while using the SMTP Deux component. This method can be modified to suit the needs of the database in which the SMTP Deux component has been installed.



## **SMTPd\_Extract\_EmailAddress**

***SMTPd\_Extract\_EmailAddress*** ( *Formatted Recipient* ) => *Email Address*

***SMTPd\_Extract\_EmailAddress***

```
(
    -> Formatted Recipient : Text
)
=> Email Address : Text
```

| <b>Parameter</b>           | <b>Type</b> | <b>Description</b>     |
|----------------------------|-------------|------------------------|
| <i>Formatted Recipient</i> | <b>Text</b> | Formatted recipient    |
| <i>Email Address</i>       | <b>Text</b> | Full name of recipient |

The method ***SMTPd\_Extract\_EmailAddress*** will extract the email address within a properly formatted

recipient. See the section **Basics of SMTP, Formatted Recipients** of this manual, above, for details on properly formatted recipients for use in the header of email being sent.

*Formatted Recipient* is the formatted recipient to extract a value from.

*Email Address* is email address extracted from *Formatted Recipient* .



## **SMTPd\_Extract\_FullName**

**SMTPd\_Extract\_FullName** (*Formatted Recipient* ) => *Full Name*

**SMTPd\_Extract\_FullName**

```
(  
    -> Formatted Recipient : Text  
)  
=> Full Name : Text
```

| Parameter                  | Type | Description            |
|----------------------------|------|------------------------|
| <i>Formatted Recipient</i> | Text | Formatted recipient    |
| <i>Full Name</i>           | Text | Full name of recipient |

The method **SMTPd\_Extract\_FullName** will extract the full name within a properly formatted recipient. See the section **Basics of SMTP, Formatted Recipients** of this manual, above, for details on properly formatted recipients for use in the header of email being sent.

*Formatted Recipient* is the formatted recipient to extract a value from.

*Full Name* is full name extracted from *Formatted Recipient* .



## **SMTPd\_Get\_Attachment\_w\_Header**

**SMTPd\_Get\_Attachment\_w\_Header** ( *Referenced Attachment* ;  
*Attachment Filename* ; *Content Type* ) => *Error Code*

**SMTPd\_Get\_Attachment\_w\_Header**

```
(  
    -> Referenced Attachment : Pointer  
    -> Attachment Filename : Text  
    -> Content Type : Text  
)  
    => Error Code : Longint
```

| <b>Parameter</b>             | <b>Type</b>    | <b>Description</b>   |
|------------------------------|----------------|--|
| <i>Referenced Attachment</i> | <b>Pointer</b> | Referenced BLOB containing encoded document to include as document within formatted attachment |
| <i>Attachment Filename</i>   | <b>Text</b>    | Full filename of attachment formatted for sending through email                                |
| <i>Content Type</i>          | <b>Text</b>    | Content type of attachment being formatted for sending through email                           |
| <i>Error Code</i>            | <b>Longint</b> | Error code returned from method for formatting attachment for sending through email            |

The method **SMTPd\_Get\_Attachment\_w\_Header** will format an encoded document for properly sending through email. This routine should be used in conjunction with the SMTP Deux method **SMTPd\_Send\_Message\_Complex** only.

*Referenced Attachment* is a pointer to a BLOB containing the document to include as an attachment within the formatted attachment being created for sending through email. The contents of the referenced BLOB will be Base64 encoded (a standard encoding scheme for email attachments) for sending through email.

The resulting, formatted attachment will be the value referenced by *Referenced Attachment* after this method is successfully called.

*Attachment Filename* is the full document name of the attachment which is being formatted for sending through email.

*Content Type* is the type of content of the attachment being formatted for sending through email. Common values for content type include:

```
text/plain
text/html
image/gif
image/jpeg
application/pdf
application/octet-stream
application/x-machbinary
application/x-stuffit
```

See the section **Basics of SMTP, Content Types** in this manual, above, for more information on content types.

*Error Code* is the error code returned from calling this method for formatting an attachment for sending through email. The following tables lists all of the values returned from this method in *Error Code* :

| <u>Value</u> | <u>Description</u>                     |
|--------------|--|
| 0            | no error, formatting done successfully |
| - 1          | referenced attachment is empty         |
| - 2          | filename is empty                      |
| - 3          | content type is empty                  |



## **SMTPd\_Get\_Recipient\_Formatted**

**SMTPd\_Get\_Recipient\_Formatter** ( *Full Name* ; *Email Address* ) =>  
*Formatted Recipient*

```
SMTPd_Get_Recipient_Formatter
(
    -> Full Name : Text
    -> Email Address : Text
)
=> Formatted Recipient : Text
```

| <b>Parameter</b>           | <b>Type</b> | <b>Description</b>         |
|----------------------------|-------------|----------------------------|
| <i>Full Name</i>           | <b>Text</b> | Full name of recipient     |
| <i>Email Address</i>       | <b>Text</b> | Email address of recipient |
| <i>Formatted Recipient</i> | <b>Text</b> | Formatted recipient        |

The method *SMTPd\_Get\_Recipient\_Formatted* will properly format a recipient line for inclusion in an email being sent. See the section **Basics of SMTP, Formatted Recipients** of this manual, above, for details on properly formatted recipients for use in the header of email being sent.

*Full Name* is full name of the recipient being formatted. It is valid to have an empty value for this parameter.

*Email Address* is the email address of the recipient being formatted

*Formatted Recipient* is the formatted recipient for the parameters specified in calling this method.



## **SMTPd\_Send\_Message\_Attachment**

**SMTPd\_Send\_Message\_Attachment** ( *From Formatted Address ; Referenced To Formatted Addresses ; Referenced CC Formatted Addresses ; Referenced BCC Formatted Addresses ; Subject ; Body ; SMTP Server Domain Name ; Reply-To Formatted Address ; Referenced Unencoded Attachment ; Attachment Filename ; Attachment Content Type* ) => Error Code

### **SMTPd\_Send\_Message\_Attachment**

(

- > *From Formatted Address* : **Text**
- > *Referenced To Formatted Addresses* : **Pointer**
- > *Referenced CC Formatted Addresses* : **Pointer**
- > *Referenced BCC Formatted Addresses* : **Pointer**
- > *Subject* : **Text**
- > *Body* : **Text**
- > *SMTP Server Domain Name* : **Text**
- > *Reply-To Formatted Address* : **Text**
- > *Referenced Unencoded Attachment* : **Pointer**

```

-> Attachment Filename :Text
-> Attachment Content Type :Text
)
=> Error Code : Longint

```

| <b>Parameter</b>                          | <b>Type</b> | <b>Description</b>   |
|---|-------------|--|
| <i>From Formatted Address</i>             | Text        | Formatted address to send email from   |
| <i>Referenced To Formatted Addresses</i>  | Pointer     | Referenced text array containing formatted addresses for To: line                              |
| <i>Referenced CC Formatted Addresses</i>  | Pointer     | Referenced text array containing formatted addresses for CC: line                              |
| <i>Referenced BCC Formatted Addresses</i> | Pointer     | Referenced text array containing formatted addresses for blind carbon copy recipients of email |
| <i>Subject</i>                            | Text        | Subject of email   |
| <i>Body</i>                               | Text        | Contents of email  |
| <i>SMTP Server Domain Name</i>            | Text        | Domain name of SMTP server to use for sending email  |
| <i>Reply-To Formatted Address</i>         | Text        | Formatted address to include to email as a reply-to address                                    |
| <i>Referenced Unencoded Attachment</i>    | Pointer     | Referenced BLOB containing unencoded document to include as attachment with email being sent   |
| <i>Attachment Filename</i>                | Text        | Full filename of attachment being sent with email  |
| <i>Attachment Content Type</i>            | Text        | Content type of attachment being sent with email   |
| <i>Error Code</i>                         | Longint     | Error code returned from method for sending email  |

The method *SMTPd\_Send\_Message\_Attachment* will send a single email using the parameters provided. This method is the simplest and easiest means to send email with an attachment using SMTP Deux, providing basic parameters and options for the email to be sent.

*From Formatted Address* is the formatted address to use to send the email from. Due to limitations in the SMTP protocol, the formatted address listed as the From: need not be an actual email address; but , it is strongly

considered to be "bad form" to send email with a From: line that is invalid.

*Referenced To Formatted Addresses* is a pointer to an array of formatted addresses to use in the To: line of the email and to include as recipients of the email. Pass in NULL for this parameter if no To: addresses are wanted.

*Referenced CC Formatted Addresses* is a pointer to an array of formatted addresses to use in the CC: line of the email and to include as recipients of the email. Pass in NULL for this parameter if no CC: addresses are wanted.

*Referenced BCC Formatted Addresses* is a pointer to an array of formatted addresses to include as recipients of the email. BCCed formatted addresses will not be listed in the header of the email as being recipients of any kind. Pass in NULL for this parameter if no BCC: addresses are wanted.

*Subject* is the subject line of the email to be sent. There are no prohibitions against sending an email with an empty Subject: line, though it is considered to be "bad form" to do so.

*Body* is the full body of the email to be sent. There are no prohibitions against sending an email with no content, though it is considered to be "bad form" to do so. The contents of the body are restricted to common 4D restrictions for text variables, and should therefore be used only for textual bodies of 32000 bytes or less.

*SMTP Server Domain Name* is the full domain name of the SMTP server to use to send the email. This can be the IP address of the SMTP server, if needed; merely make certain in this case that the IP address is specified in a text format.

*Reply-To Formatted Address* is the formatted address to use in an optional Reply-To: line in the email to be sent. Pass in NULL for this parameter if no Reply-To: line is wanted. A Reply-To: line is optional in email and not all

email clients support the Reply-To: line when replying to an email received.

*Referenced Unencoded Attachment* is a pointer to a BLOB containing the document to include as an attachment with the email to be sent. The contents of the referenced BLOB will be Base64 encoded (a standard encoding scheme for email attachments) for sending and included in the email in a standard format for reception. If no attachment is to be sent with the email then this parameter can be set to NULL.

*Attachment Filename* is the full document name of the attachment which is being sent with the email. If no attachment is being sent then this parameter can be set to NULL.

*Attachment Content Type* is the type of content of the attachment being sent with the email. Common values for content type include:

- text/plain
- text/html
- image/gif
- image/jpeg
- application/pdf
- application/octet-stream
- application/x-macbinary
- application/x-stuffit

If no attachment is being sent with the email then this parameter can be set to NULL.

See the section **Basics of SMTP, Content Types** in this manual, above, for more information on content types.

*Error Code* is the error code returned from calling this method for sending the email. If the sending of the email was successful, *Error Code* will be set to zero (0). Any problem encountered when trying to send the email will force *Error Code* to be set to a negative value.



## SMTPd\_Send\_Message\_Complex

**SMTPd\_Send\_Message\_Complex** ( *Referenced Mail Header IDs ; Referenced Mail Header Values ; SMTP Server Domain Name ; Referenced Body ; Content Type ; Referenced Array of Referenced Attachments* ) => Error Code

### SMTPd\_Send\_Message\_Complex

(  
-> *Referenced Mail Header IDs* : **Pointer**  
-> *Referenced Mail Header Values* : **Pointer**  
-> *SMTP Server Domain Name* : **Text**  
-> *Referenced Body* : **Pointer**  
-> *Content Type* : **Text**  
-> *Referenced Array of Referenced Attachments* : **Pointer**  
)  
=> *Error Code* : **Longint**

| Parameter   | Type           | Description  |
|---|----------------|--|
| <i>Referenced Mail Header IDs</i>                 | <b>Pointer</b> | <b>Pointer</b> to longint array containing mail header ID values corresponding to <i>Referenced Mail Header Values</i> , below |
| <i>Referenced Mail Header Values</i>              | <b>Pointer</b> | <b>Pointer</b> to text array containing mail header values corresponding to <i>Referenced Mail Header IDs</i> , above          |
| <i>SMTP Server Domain Name</i>                    | <b>Text</b>    | Domain name of SMTP server to use for sending email  |
| <i>Referenced Body</i>                            | <b>Pointer</b> | <b>Pointer</b> to BLOB containing body of email to be sent   |
| <i>Content Type</i>                               | <b>Text</b>    | Content type of body of email being sent   |
| <i>Referenced Array of Referenced Attachments</i> | <b>Pointer</b> | <b>Pointer</b> to an array of pointers referenced formatted attachments to be sent with the email                              |
| <i>Error Code</i>                                 | <b>Longint</b> | Error code returned from method for sending email  |

The method **SMTPd\_Send\_Message\_Complex** will send an email with the parameter specified. This method is the most complex, and most flexible, means to send email using SMTP Deux, providing parameters and options for all areas of the email to be sent.

*Referenced Mail Header IDs* is a pointer to a longint array containing the email header IDs corresponding to different email header lines. The list of accepted email header IDs are listed in the **Constants, SMTPd\_Header\_Codes** section of this manual, above. The array referenced by this parameter must have the same number of elements and correspond by index for values as that of the *Referenced Mail Header Values* parameter.

*Referenced Mail Header Values* is a pointer to a text array containing the email header values corresponding to different email header lines. The array referenced by this parameter must have the same number of elements and correspond by index for IDs as that of the *Referenced Mail ID Values* parameter.

All values in these arrays which exist for To:, CC:, and BCC: lines will be recipients of the email being sent. Of course, values in these arrays for BCC: recipients will not be listed in the actual headers of the email being sent. Values for each header line must be properly formatted. Specifically, the formatting of To:, CC:, BCC:, and Reply-To: values can be easily accomplished by using the SMTP Deux method entitled

***SMTPd\_Get\_Recipient\_Formatted***, documented above.

*SMTP Server Domain Name* is the full domain name of the SMTP server to use to send the email. This can be the IP address of the SMTP server, if needed; merely make certain in this case that the IP address is specified in a text format.

*Referenced Body* is a pointer to a BLOB containing the body of the email to be sent. The body of an email need not be just text, though it is commonly considered "bad form" to send an email with a body of any other content type. There are no restrictions at all, either for size or content type, for the body of the email to be sent when using this method. The contents of *Referenced Body* will be used directly as the content of the email to be sent.

*Content Type* is the type of content of the body of the email being sent. Common values for content type include:

```
text/plain
text/html
image/gif
image/jpeg
application/pdf
application/octet-stream
application/x-machbinary
application/x-stuffit
```

If NULL is passed as the value for this parameter, the body content type will assume to be "text/plain" and the sent will reflect this assumption.

See the section **Basics of SMTP, Content Types** in this manual, above, for more information on content types.

*Referenced Array of Referenced Attachments* is a pointer to an array of pointers which referenced BLOBs containing the attachments to send with the email. Each attachment in the doubly referenced BLOBs must be encoded and formatted already for sending. Use the SMTP Deux method ***SMTPd\_Get\_Attachment\_w\_Header***, documented above, to properly format attachments for sending in an email. Passing NULL for this parameter will indicate that no attachments are to be sent with the email.

*Error Code* is the error code returned from calling this method for sending the email. If the sending of the email was successful, *Error Code* will be set to zero (0). Any problem encountered when trying to send the email will force *Error Code* to be set to a negative value.



## **SMTPd\_Send\_Message\_Simple**

**SMTPd\_Send\_Message\_Simple** ( *From Formatted Address ; To Formatted Address ; Subject ; Body ; SMTP Server Domain Name ; Reply-To Formatted Address* ) => Error Code

### **SMTPd\_Send\_Message\_Simple**

```
(
    -> From Formatted Address : Text
    -> To Formatted Address : Text
    -> Subject : Text
    -> Body : Text
    -> SMTP Server Domain Name : Text
    -> Reply-To Formatted Address : Text
)
=> Error Code : Longint
```

| <b>Parameter</b>                  | <b>Type</b> | <b>Description</b>  |
|-----------------------------------|-------------|---|
| <i>From Formatted Address</i>     | Text        | Formatted address to send email from                        |
| <i>To Formatted Address</i>       | Text        | Formatted address to send email to                          |
| <i>Subject</i>                    | Text        | Subject of email  |
| <i>Body</i>                       | Text        | Contents of email   |
| <i>SMTP Server Domain Name</i>    | Text        | Domain name of SMTP server to use for sending email         |
| <i>Reply-To Formatted Address</i> | Text        | Formatted address to include to email as a reply-to address |
| <i>Error Code</i>                 | Longint     | Error code returned from method for sending email           |

The method **SMTPd\_Send\_Message\_Simple** will send a single email using the parameters provided. This method is the simplest and easiest means to send email using SMTP Deux, providing basic parameters and options for the email to be sent.

*From Formatted Address* is the formatted address to use to send the email from. Due to limitations in the SMTP protocol, the formatted address listed as the From: need not be an actual email address; but , it is strongly considered to be "bad form" to send email with a From: line that is invalid.

*To Formatted Address* is the formatted address to send the email to and to include in the To: line as a recipient of the email.

*Subject* is the subject line of the email to be sent. There are no prohibitions against sending an email with an empty Subject: line, though it is considered to be "bad form" to do so.

*Body* is the full body of the email to be sent. There are no prohibitions against sending an email with no content, though it is considered to be "bad form" to do so. The contents of the body are restricted to common 4D restrictions for text variables, and should therefore be used only for textual bodies of 32000 bytes or less.

*SMTP Server Domain Name* is the full domain name of the SMTP server to use to send the email. This can be the IP address of the SMTP server, if needed; merely make certain in this case that the IP address is specified in a text format.

*Reply-To Formatted Address* is the formatted address to use in an optional Reply-To: line in the email to be sent. Pass in NULL for this parameter if no Reply-To: line is wanted. A Reply-To: line is optional in email and not all email clients support the Reply-To: line when replying to an email received.

*Error Code* is the error code returned from calling this method for sending the email. If the sending of the email was successful, *Error Code* will be set to zero (0). Any problem encountered when trying to send the email will force *Error Code* to be set to a negative value.



# Version History

The following is a brief version history of the SMTP Deux component. It details release notes, bug fixes, and changes for each version publicly available.

# SMTP Deux v1.0.0b02

*released 20010629*

## Changes:

Removed comment stating to only use in conjunction with send message complex in routine

**SMTPd\_Get\_Recipient\_Formatted**.

Created two new routines **SMTPd\_Extract\_FullName**, **SMTPd\_Extract\_EmailAddress**; these will extract data from a formatted SMTP recipient.

Modified the routine **SMTPd\_Send\_Message\_Simple** so that the From:, To:, and Reply-To: addresses have to be sent to it formatted with **SMTPd\_Get\_Recipient\_Formatted** beforehand.

Modified routine **SMTPd\_Send\_MAIL\_Command** so it extracts the From: address from the fully formatted From: parameter before sending MAIL command; also wrapped the unformatted From: address with "<>".

Modified routine **SMTPd\_Send\_RCPT\_Command** so it extracts the recipients address from the formatted addresses, checks to make sure that it was received, and then proceeds to build message to send.

Modified the routine **SMTPd\_MH\_Add\_Recipients** so that it builds the recipients for the mail header without the full name parameter, since the full name should already be formatted with the address.

Modified the routine **SMTPd\_Send\_Message\_Attachment** so that all of the addresses have to be formatted with Modified before hand.

Modified routine **SMTPd\_Send\_Message\_Complex** to build address list with them still formatted; also checks the addresses with the new routine **SMTPd\_Extract\_Address** for proper formatting.

# SMTP Deux v1.0.0b01

*released 20010518*

## Changes:

First public release of the component.



## Using SMTP Deux

asd



## SMTP Deux Error Codes

asd



## Index

asd