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Nokia Mobile Phones

Nokia 9210 Communicator

Setting Up E-mail Service

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1. Introduction

This document describes the steps needed to set up the Nokia 9210 Communicator to read and write e-mail.

The Nokia 9210 Communicator messaging system includes an e-mail client that supports the most common Internet e-mail protocols to access a company's e-mail server.

Figure 1 illustrates how the communicator connects to the e-mail server via a dial-in service access point.
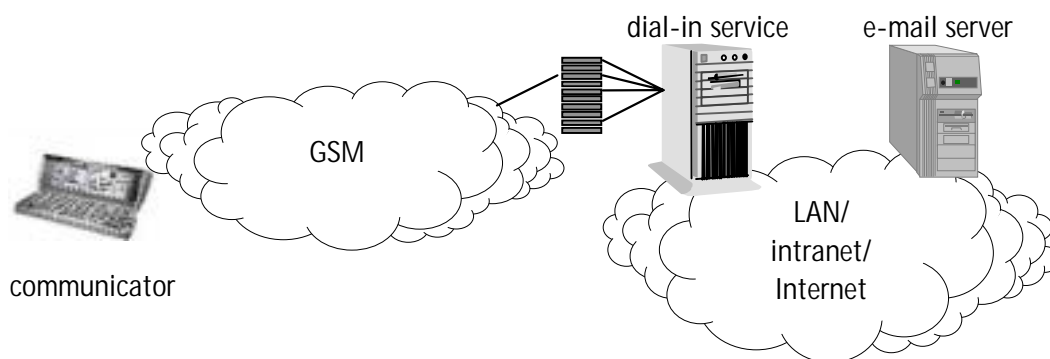

Figure 1. Connecting the Nokia 9210 Communicator to an e-mail server

For more information about compatible e-mail servers, see *List of Compatible E-mail Systems*.

There are certain requirements to make e-mail access possible. There must be:

- a TCP/IP connection between the communicator and the user's e-mail server (via a dial-in service with PPP support). For more information about setting up network connections in the Nokia 9210 Communicator, see the *Nokia 9210 Communicator Internet Communications Guide*.
- POP3 or IMAP4 (Version 4rev1, RFC 2060) protocol support from the remote e-mail server for retrieving messages. Both of these protocols are commonly supported by the latest e-mail servers.
- SMTP support for sending e-mail messages.
- Messages must also follow MIME formats.

RFC documents specifying these protocols are listed at the end of this document.

Note that the X.400 mail system is not supported.

For better security, it is possible to use encrypted connections between the communicator and the e-mail server. Encryption is implemented using transport layer security (SSL/TLS), which protects the IMAP4, POP3, and SMTP connection between the communicator and the e-mail server. Note that encrypted e-mail messages (such as S/MIME and PGP) are not supported. Secure SSL/TLS connection is negotiated using IMAP4, POP3, and SMTP protocol extensions (specified in RFC 2487 and RFC 2595). Systems that use a separate TCP port for secure connections, and do not negotiate the security protocol during the IMAP/SMTP session, are not supported.

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2. Features of the Communicator E-Mail Client

The communicator's e-mail client displays e-mail messages in the same familiar way as normal PC-based e-mail clients. User can see all the messages in the remote mailbox and select only the important ones, new messages, or all messages to be retrieved in the communicator. There is an easy *Retrieve mail* command that can be used to check, and optionally also to download, new e-mail. It is also possible to select whether or not attachments are downloaded along with the messages when the IMAP4 protocol is used.

Received e-mail messages can be read and replied to also when offline, which saves connection time. Replies and new e-mail messages can be sent either immediately upon the next connection to the e-mail account or when they are explicitly requested to be sent.

Attachments are supported and downloaded attachments can be viewed on the communicator. Initially supported attachment types are marked with (*) in Table 1. Other attachment types in Table 1 are supported if the appropriate application or converter is installed in the device. New attachment types can be supported via add-on applications installed in the communicator. Downloaded attachments can be also saved to files, and transferred to a PC for viewing. The overall use of attachments is rather limited by the small disk space and amount of free memory. A memory card can be used to expand the available disk space for messaging.

Attachment type	File extensions	MIME Types
Audio File	WAV, AU, WVE	"audio/x-wav" "audio/basic" "audio/x-sibo-wve"
CompuServe GIF (*)	GIF	"image/gif"
Computer Graphics Metafile	CGM	"image/cgm" "image/x-cgm"
Corel/Novell Presentations	SHW	"image/x-presentations"
EPOC Word (*)	-	"x-epoc/x-app268450404"
EPOC Sheet (*)	-	"x-epoc/x-app268450429"
EPOC Bitmap (*)	MBM	"image/x-epoc-mbm"
Internet HyperText Markup Language (*)	HTML, HTM	"text/html"
Lotus 1-2-3 v.1/2/3/4/5/97/Millenium	WQ1, WKU, WK1, WK3, WK4, WK5, WK6, 123	"application/x-lotus-123" "application/vnd.lotus-1-2-3"
Lotus AMI Draw	SDW	"image/x-amidraw"
Microsoft Excel 2/3/4/5/7/97/98/2000	XLS, XLC	"application/x-msexcel" "application/x-excel" "application/vnd.ms-excel" "application/msexcel" "application/xlc"
Microsoft PowerPoint 3/4/7/97/98/2000	PPT, POT, PPS	"application/x-mspowerpoint" "application/vnd.ms-powerpoint" "application/ppt" "application/pot" "application/pps" "application/mspowerpoint"
Microsoft Project	MPP	"application/vnd.ms-project"
Microsoft Word 1/2/3/4/5/6/7/97/98/2000	DOC, WRI	"application/msword" "application/vnd.ms-word" "application/vnd.msword"
Paintbrush	PCX, DCX	"image/x-pc-paintbrush"
PKZIP Format	ZIP	"application/zip"

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Portable Network Graphics	PNG	"image/png" "image/x-png"
Rich Text Format	RTF	"application/rtf" "text/rtf"
Ringing Tones (*)	MG	"application/vnd.nokia.ringing-tone"
Tagged Image File Format (TIFF, JPEG (*))	TIF, JPG, JIF	"image/tiff" "image/jpeg"
Text (*)	TXT	"text/plain"
UNIX Compress, Tar	TAR, TAZ	"application/x-tar"
UNIX Gzip	TGZ	"application/x-gzip" "application/gzip"
Visio	VSD	"application/vnd.visio"
Windows Bitmap	BMP, RLE, ICO, CUR	"image/x-win-bitmap" "image/x-MS-bmp" "image/bmp" "image/x-bmp"
Windows Metafile	WMF, EMF	"image/x-win-metafile" "image/x-wmf"
WordPerfect 4/5/6/7/8	WPD	"application/wordperfect5" "application/wordperfect5.1" "application/x-wordperfect6"

Table 1. Initially supported attachment types

Multiple remote mailboxes can be defined in the communicator's messaging system. Each remote mailbox is displayed as a separate folder in the messaging centre application. When replying to a message received by a particular e-mail account, the communicator makes sure that replies will be sent using the same e-mail account by default. This ensures that potentially confidential business e-mail is sent only via the same e-mail account that is located in the company's intranet, even if there may be other insecure Internet e-mail accounts defined in the device at the same time.

It is also possible to organise the remote mailbox by moving and copying messages between remote folders when the IMAP4 protocol is used. New remote folders can be created and remote messages can be moved or copied between remote folders stored on the e-mail server. Note that the IMAP4 APPEND command is not supported. This means that it is not possible to upload local messages into the e-mail server. However, it is possible to define that a copy of each outgoing e-mail message is automatically sent to the user's own e-mail address as well. When this option is used, all sent messages will also appear in the remote Inbox, and they can be moved to other remote folders if necessary.

Offline operations (move, copy, or delete messages) are supported. These operations occur when the e-mail client connects to the remote mail server the next time. The IMAP4 protocol supports copy, move, and delete operations when offline, and the POP3 protocol allows the deletion of e-mail messages while offline.

The APOP command can be used with the POP3 protocol to protect the password when connecting to a POP3 mail server.

A memory card can be used to increase the message storage capacity. The communicator messaging system uses either internal memory or the memory card to store e-mail messages. The message store can be moved from the internal memory to the memory card to obtain more storage capacity for e-mail.

In order to reduce disk space used for downloaded e-mail, the e-mail client can optionally also clear messages older than a pre-defined time (one day, one week, two weeks, or one month). Clearing mail messages means that downloaded message texts and attachments are removed from the device, but that the original messages are still

available on the remote e-mail server. Mail messages can be cleared using the *Tools > Message storage* menu command in the Messaging application. Select to delete either all mail messages, or mail messages older than 1 day, 1 week, 2 weeks, or 1 month, and press the *Delete now* button to clear these messages. Cleared mail messages can be downloaded again from the remote mail server when necessary. Note that clearing does not delete faxes or short messages.

The communicator's e-mail client also supports HTML messages. This means that new e-mail messages may contain Web-like formatted text, and received messages may also contain inline images and links to other Web pages.

Read receipts may be requested when sending e-mail, and the communicator e-mail client can also generate responses to read receipt requests included in received e-mail. Read receipts are automatic responses that are sent to the sender of an e-mail message and they indicate when the recipients have opened the message. Read receipts are implemented using "Disposition-Notification-To" headers (as specified in RFC 2298). Note that not all e-mail clients generate read receipts, so requested read receipts may not arrive because recipients read their e-mail with e-mail clients that do not support or do not generate message disposition notifications. Also, automatic generation of read receipt responses may be turned off in the Nokia 9210 Communicator if read receipts are considered unnecessary.

3. Configuring the Communicator E-Mail Client

Configuring the Nokia 9210 Communicator for remote e-mail access is a similar procedure to configuring a laptop computer to use the Netscape Messenger e-mail client, for example.

Important information that must be filled in when defining a new e-mail account includes the following:
- host name to receive mail (IMAP4 or POP3 e-mail server)
- host name to send mail (SMTP server)
- mailbox type (which protocol to use, either POP3 or IMAP4)
- user name (case sensitive)
- password (case sensitive, displayed using * characters)
- dial-in access point for the mail service
- use of a secure connection (that is, it requires SSL/TLS encryption to be used)

A dial-in access point is defined in the Control panel application. For more information about setting up network connections in the Nokia 9210 Communicator, see the *Nokia 9210 Communicator Internet Communications Guide*.

New e-mail accounts are defined using the *Tools > Account settings...* menu command in the Messaging application as shown in Figure 2. Select the *Account settings...* menu item and press the *Select* command button (or just press Enter) to begin to create a new e-mail account.
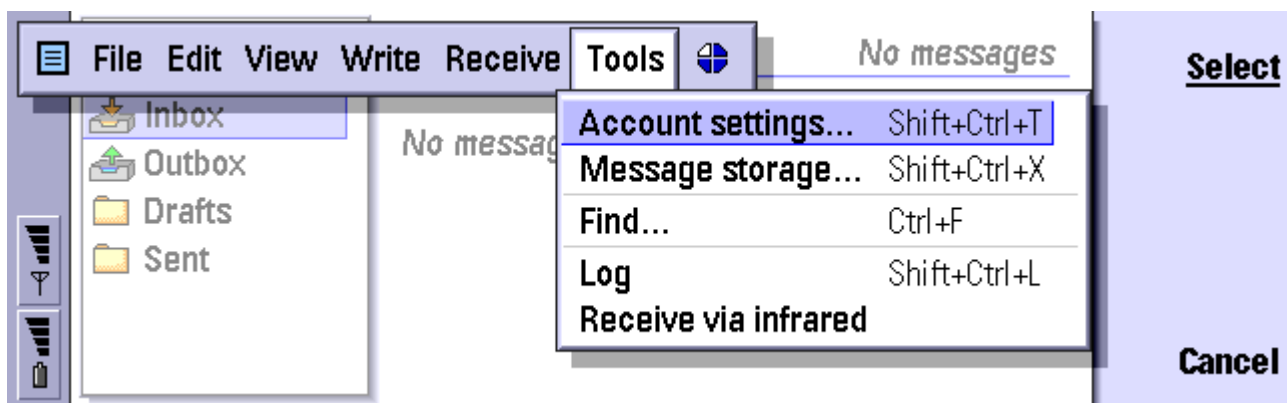

Figure 2. New e-mail accounts are defined using the Tools menu

The Account settings dialog opens (Figure 3) and displays pre-defined messaging accounts, including fax and short message settings. Press the *Create new* command button to define a new e-mail account.
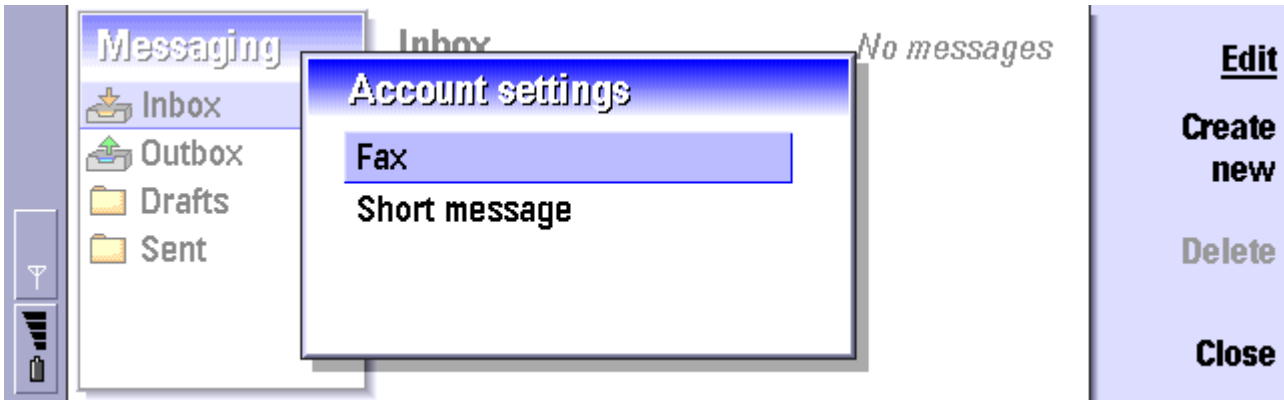

Figure 3. Defining a new account in the Account settings dialog

A dialog opens (Figure 4) which contains a list of message types. Initially there is only one item (*Mail*) available, but other message types can be installed in the device later, and they will appear in this list. As *Mail* is already selected, press the *OK* command button to open the next dialog for e-mail account details.
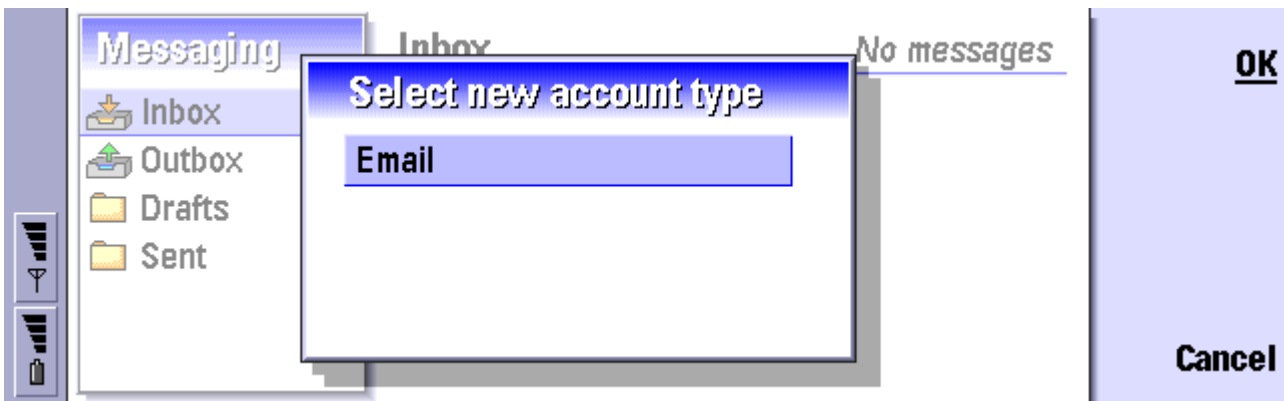

Figure 4. Account type selection dialog

The next dialog (New mail account settings, Figure 5) contains four pages. You must fill in at least the following information:

- User name used to log in the POP3/IMAP4 e-mail server
- Password for the POP3/IMAP4 e-mail server
- Your e-mail address (e.g. for replies to messages you have sent)
- Outgoing e-mail server (host name for SMTP server)
- Incoming e-mail server (host name for IMAP4 or POP3 server)

To cancel this dialog, press *Esc* or *Delete*. It removes these e-mail account settings from the device.
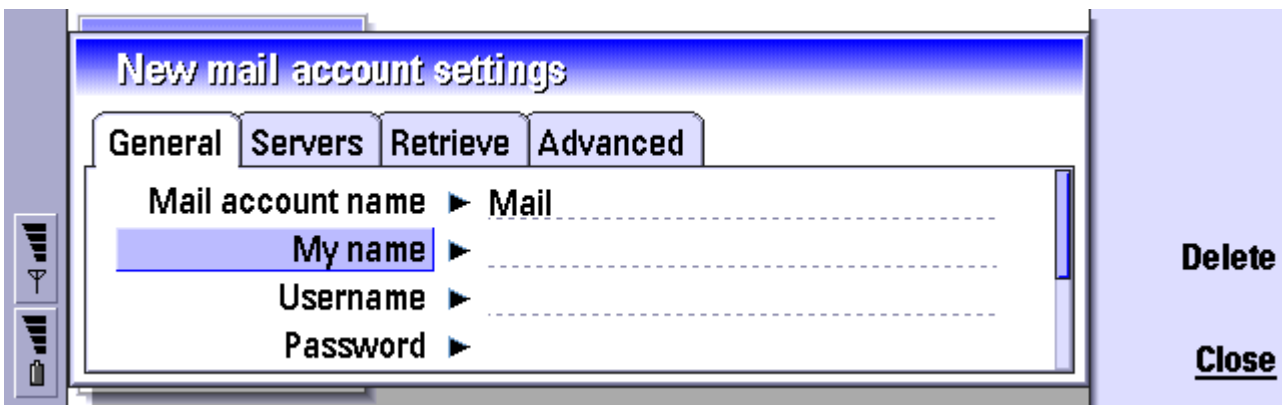
Figure 5. Settings for a new e-mail account

The mailbox type and host names for the POP3/IMAP4 and SMTP servers are defined on the *Servers* page (Figure 6). Note that the **mailbox type cannot be changed after the e-mail account settings have been saved!** IMAP4 is the default mailbox type, but it can be changed to POP3. IMAP4 enables selective attachment downloading and also access to other folders than the Inbox on the remote mail server.
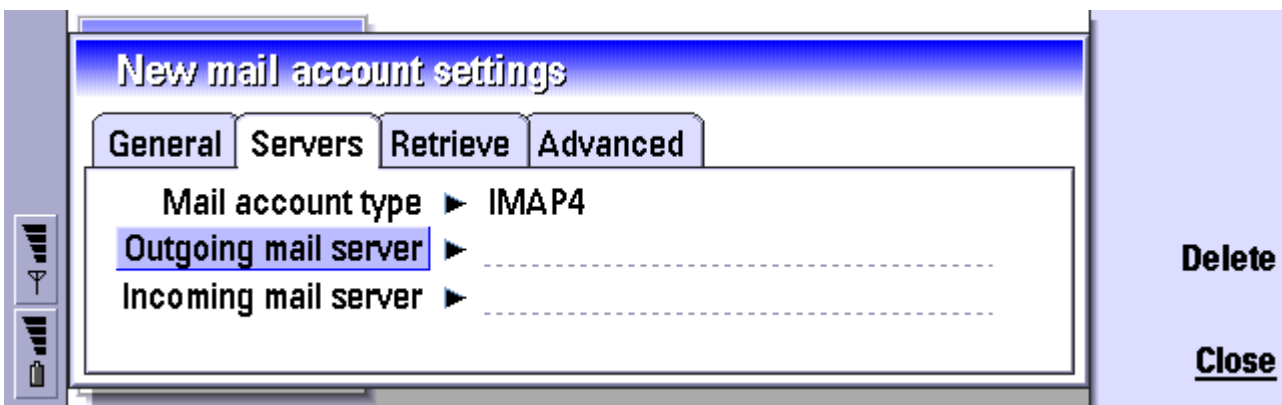

Figure 6. Selecting the mailbox type and entering host names

Other settings (on the *Retrieve* and *Advanced* pages) include default message types (HTML or plain text), when messages are sent (immediately, on next connection to the e-mail account, on request only), and signatures.

The *Advanced* page also contains the option to select a secure connection (SSL). If the secure connection is set, the Nokia 9210 Communicator tries to negotiate SSL/TLS encryption using appropriate STLS or STARTTLS commands within the same TCP session (see RFC 2487 and RFC 2595). Implementations that use separate ports for secure connections are not supported. Note that the e-mail client does not accept an insecure connection if the secure connection is required in e-mail settings.

After you have filled in all details, press *Close* to close the dialogs and the new e-mail account appears in the Messaging application as shown in Figure 7.
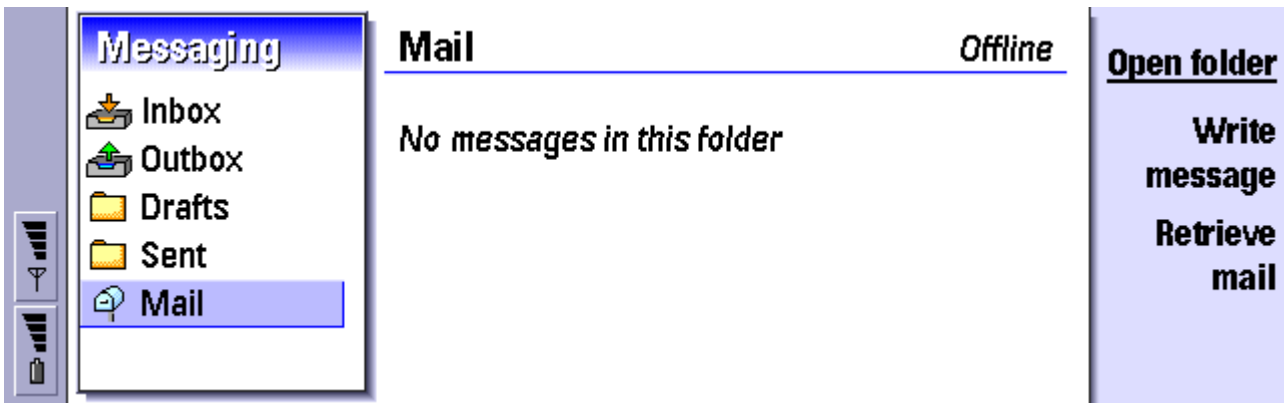
Figure 7. A new e-mail account in the Messaging application

Now you are ready to use the *Retrieve mail* command to connect to the newly defined e-mail account and fetch messages. The very first time the connection to a IMAP4 account may take a longer time, depending on the number of mail messages in the remote Inbox and also the number of remote mail folders, because the device fetches message headers and scans remote folders for subscriptions. Subsequent *Retrieve mail* commands should work faster as only changed folder data is downloaded in the device.

4. Configuring the E-Mail client with Smart Messages

The Nokia 9210 Communicator supports basic *Internet Access Configuration* smart messages. Only *Basic Mail* configuration messages can be used, as *Extended Mail* configuration messages are not supported. Configuration messages are specified in the *Smart Messaging Specification (revision 2.0.0),* available at http://www.forum.nokia.com.

Smart messages make it possible to define and to send e-mail configurations ready for each user. When the user receives a smart message defining a new e-mail account, a confirmation dialog is displayed. The user just needs to accept the new e-mail configuration, and it is ready for use.

Note that smart messages are implemented as BIO (bearer-independent objects) in the Symbian EPOC platform. For more information about remote configuration, see the *Nokia 9210 Remote Configuration Guide.*

5. RFC Documents

Internet e-mail protocols are specified using RFC (Request for Comments) documents. RFC documents are available, for example, from IETF (The Internet Engineering Task Force, http://www.ietf.org/).

SMTP (Simple Mail Transfer Protocol)	RFC 821
Standard for the format of ARPA Internet text messages	RFC 822
POP3 (Post Office Protocol, version 3)	RFC 1939
PPP (Point-to-Point Protocol)	RFC 1661
MIME (Multipurpose Internet Mail Extensions) Part One: Format of Internet Message Bodies	RFC 2045

MIME (Multipurpose Internet Mail Extensions) Part Two: Media Types	RFC 2046
MIME (Multipurpose Internet Mail Extensions) Part Three: Message Header Extensions for Non-ASCII Text	RFC 2047
IMAP4 (Internet Message Access Protocol, version 4rev1)	RFC 2060
TLS (Transport Layer Security Protocol, version 1.0)	RFC 2246
Read receipts (An Extensible Message Format for Message Disposition Notifications, Disposition-Notification-To header)	RFC 2298
SMTP Service Extension for Secure SMTP over TLS	RFC 2487
Using TLS with IMAP, POP3, and ACAP	RFC 2595