

Exchange 2003 – Explaining Exchange Message formats

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Abstract

This article will give you information about Exchange Server 2003 Message Formats like MIME, UUENCODE and more and how to configure Message formats on Exchange for interoperability with other messaging systems or mail clients.

Let's begin

Exchange Server 2003 can use different Messages Formats on an e-mail domain base. By default Exchange Server 2003 uses only one default setting for delivering all messages. The default settings are suitable for many small and medium sized customers but in large messaging environments or for interoperability with non Microsoft Exchange messaging systems it is often necessary to implement different settings for different e-mail domains. Before we start explaining the Exchange settings some theory and basics about Message formats.

There are two well known Message formats:

- UUENCODE
- MIME

UUENCODE

UUENCODE was a program that allows sending binary Data via e-mail which allows only sending ASCII (American Standard Code for Information Interchange) code. The UU stands for Unix to Unix and encode for message encoding. The Principle is like the Base64 encoding scheme. Three bytes of the binary file (24 bit) would be divided into four 6 bytes and these 6 bytes values would be associated with printable ASCII code. The first UUENCODE Implementations uses ASCII code from 32 to 95.

MIME

MIME (Multipurpose Internet Mail Extensions) is a coding standard that defines the structure of E-Mails and other Internet messages. MIME is also used for declaration of content from other Internet protocols like HTTP, Desktop environments like KDE, Gnome or Mac OS X Aqua. The standard is defined in RFC 2045.

With MIME it is possible to exchange information about the type of messages (the content type) between the sender and the recipient of the message. MIME also defines the art of coding (Content-Transfer-Encoding).

There are different coding methods defined for the transportation of non ASCII characters in plain text documents and non text documents like Images, Voice and Video for transportation through text based delivery systems like e-mail or the Usenet.

The non text elements will be encoded from the sender of the message and will be decoded by the message recipient. Coding of non ASCII characters is often based on "quoted printable" coding, binary data typically used Base64-coding.

There is an extension of this Standard called S/MIME (Secure Multipurpose Internet Mail Extensions) that allows the Signing and encryption of messages. There are other solutions of e-mail encryption like PGP/MIME (RFC 2015 and 3156).

TNEF / WINMAIL.DAT

TNEF is short for (Transport Neutral Encapsulation Format) and is a proprietary file format used by Microsoft in Microsoft Outlook and Exchange Server to define a file format for Attachments in e-mail messages. Attachments in this format often contains files called winmail.dat or win.dat.

This proprietary format allows Outlook users to use some advanced features but when Outlook users exchange messages with other programs than Outlook the message can get unreadable or contains the file called winmail.dat. There are Third Party tools that allows to open the proprietary winmail.dat.

Internet Message Formats

There is one setting in Exchange Server 203 that you can use to associate specific file extensions to MIME content type.

Please note

MIME content types are usually used by browsers and e-mail clients. For example, the MIME content type application/x-msexcel is associated with the .xls file extension, and refers to an Excel spreadsheet. Therefore, if a document were to display this MIME content type to a browser such as Internet Explorer, or an e-mail client such as Outlook Express, Microsoft Excel could be automatically started to view the document.

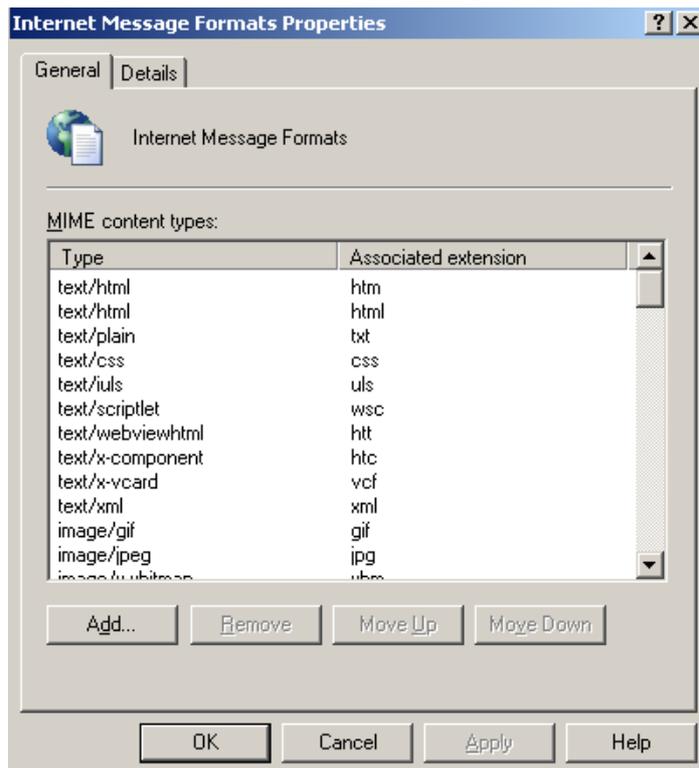


Figure 1: MIME Content types

Description of Messaging formats

Plain text

A plain text message is the most accepted form of messaging format. All e-mail message readers can display text messages in plain text format.

Rich Text Format (RTF)

Exchange 2003 uses a different format of RTF messaging for messages that are delivered between Microsoft Outlook users. However, RTF is only readable by Outlook.

HTML format

HTML mail is a recent implementation that makes it possible to display rich content in a message. When you use the HTML mail format, the message is sent as an HTML page, complete with tags to change the appearance of the text. The recipient's e-mail client program then formats and displays the HTML.

Plain text and HTML

Exchange 2003 can send messages to external domains as both plain text and HTML. This format appears correctly on both types of client. However, the messages become two times as large and processing takes longer. You may be able to view both the plain text and the HTML in the replies to the message.

MIME and uuencode

MIME and user-to-user encoding (uuencode) are two different methods of sending binary attachments with messages. Early e-mail client programs used uuencode as the default message format. However, most current e-mail client programs support MIME.

Message text word wrapping

Although this format is not strictly an e-mail messaging format, some earlier versions of e-mail messaging clients require that a line break is placed after the seventy-sixth or seventy-seventh character. If you do not perform this procedure, those clients can only view the first 76 characters of each line. As a result, large portions of the message may not appear.

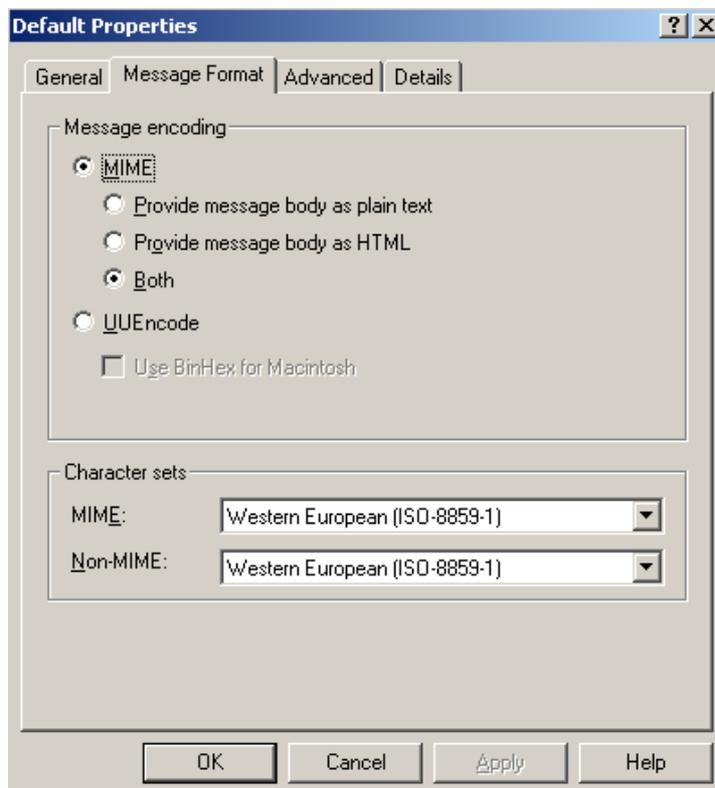


Figure 2: Message Format

There is one default setting for Message formats for all outgoing e-mails. You can choose between MIME and UUENcode format.

If your non-Exchange users work with Microsoft Office Outlook in an IMAP4 configuration, select *Provide message body as plain text*. If the mail clients of your non-Exchange users do not support MAPI but support HTML-formatted messages, select the *Provide message body as HTML* option or the *Both* option to provide the message body both as plain text and as HTML (attention: significant larger e-mails are the result).

Attention:

MIME types only apply to MAPI clients, such as Outlook 2003, when they are sending e-mail to, or receiving e-mail from, non-MAPI Internet clients, such as Outlook Express.

Advanced settings

There are some more settings that you can choose when sending messages as RTF format as you can see in the following figure.

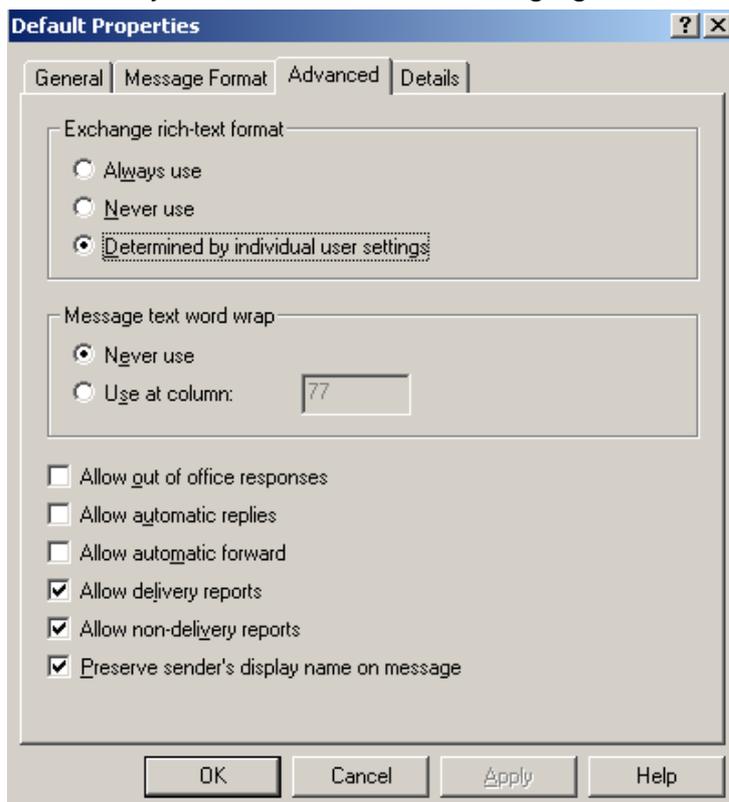


Figure 3: Advanced settings

Exchange rich-text format

Under Exchange rich-text format, select *Always use* if the messaging clients of the e-mail recipient support MAPI (such as Microsoft Outlook in an IMAP4 configuration). If recipients work with non-MAPI clients, select *Never use*. The default, *Determined by individual user settings*, allows the sender of the e-mail decide whether to send Exchange rich-text information.

Message text word wrap

Under Message text word wrap, *Never use* is selected by default. If the messaging clients of the recipient impose a maximum number of characters per line in SMTP messages, select *Use at column* and specify the number of characters per line in the corresponding text box.

Use individual message format settings for special domains

If you must use different Message formats for some special e-mail domains that use different mail systems or mail clients it is possible to create additional e-mail domains. For every additional e-mail domains you can specify individual Message Format settings.

Conclusion

I hope you now understand Exchange Message formats, message conversion and e-mail delivery to non Outlook clients a little better.

Related Links

How to configure Internet e-mail message formats at the user and the domain levels in Exchange Server 2003

<http://support.microsoft.com/kb/821750/en-us>

Frequently asked questions about MIME and content conversion in Exchange 2000 Server and in Exchange Server 2003

<http://support.microsoft.com/kb/836555/en-us>

How to Configure Internet Message Formats for a Non-Exchange Messaging System

<http://www.microsoft.com/technet/prodtechnol/exchange/guides/e2k3InterOpMig/8e3faa11-9409-49a6-a471-46f76f6dfcb1.msp?mfr=true>