CHAP9

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Chapter 1

CHAP9

1.1   Chapter 9: ADVANCED E-MAIL

E-mail by itself is a powerful tool, and by now you may be
sending e-mail messages all over the place. You might even be on a
 mailing list or two. But there is a lot more to e-mail than just
sending messages. If your host system does not have access to ftp , or it
doesn't have access to every ftp site on the Net, you can have programs
and files sent right to your mailbox. And using some simple techniques,
you can use e-mail to send data files such as spreadsheets, or even whole
programs, to friends and colleagues around the world.

    Files by E-Mail
    Encoding program files
    ftp Mail
    Sending files through the mail

A key to both is a set of programs known as encoders and decoders.
For all its basic power, Net e-mail has a big problem: it can't handle
graphics characters or the control codes found in even the simplest of
computer programs. Encoders however, can translate these into forms
usable in e-mail, while decoders turn them back into a form that you can
actually use. If you are using a Unix-based host system, chances are it
already has an encoder and decoder online that you can use. These
programs will also let you use programs posted in several Usenet
 newsgroups , such as comp.binaries.ibm.pc.

1.2   Chapter 9: Advanced e-mail (1 of 4) -- Files by E-Mail

To help people without ftp access, a number of ftp sites have
set up mail servers (also known as archive servers) that allow you to
get files via e-mail. You send a request to one of these machines and
they send back the file you want. As with ftp, you'll be able to find
everything from historical documents to software (but please note that if
you do have access to ftp, that method is always quicker and ties up
fewer resources than using e-mail).
    Some interesting or useful mail servers include:

mail-server@pit-manager.mit.edu Files of "frequently asked questions"
related to Usenet ; state-by-state lists of U.S. representatives and
Senators and their addresses and office phone numbers.

archive-server@eff.org Information about the Electronic Frontier
Foundation; documents about legal issues on the Net.

archive-server@cs.widener.edu Back copies of the Computer Underground
Digest and every possible fact you could want to know about "The
Simpsons."

netlib@uunet.uu.net Programs for many types of personal computers;
archives of past postings from many Usenet newsgroups .

archive-server@ames.arc.nasa.gov Space-related text and graphics
(GIF-format) files.

service@nic.ddn.mil Detailed information about Internet.

     Most mail servers work pretty much the same -- you send an e-mail
message that tells them what file you want and how you want it sent to
you. The most important command is "send," which tells the computer you
want it to send you a particular file.
     First, though, you'll need to know where the mail server stores that
file, because you have to tell it which directory or sub- directory it's
in. There are a couple of ways to do this. You can send an e-mail
message to the archive-server that consists of one line:

                    index

     The server will then send you a directory listing of its main, or
root directory. You'll then have to send a second message to the archive
server with one line:

                    index directory/subdirectory

where that is the directory or directory path for which you want a
listing. An alternative is to send an e-mail message to our old friend
archie, which should send you back the file's exact location on the
archive-server (along with similar listings for all the other sites that
may have the file, however)
     Once you have the file name and its directory path, compose a
message to the archive server like this:

                    send directory/subdirectory/file

     Send off the message and, anywhere from a few minutes to a couple of
days later, you'll find a new message in your mailbox: a copy of the file
you requested. The exact time it will take a file to get to you depends
on a variety of factors, including how many requests are in line before
yours (mail servers can only process so many requests at a time) and the
state of the connections between the server and you.

     There are a number of other mail servers. To get a list, send an
e-mail message to mail-server@pit-manager.mit.edu:

send usenet/comp.sources.wanted/How_to_find_sources_(READ_THIS_BEFORE_POSTING)

     You'll have to spell it exactly as listed above. Some mail servers
use different software, which will require slightly different commands
than the ones listed here. In general, if you send a message to a mail
server that says only

          help

you should get back a file detailing all of its commands.

1.3   Chapter 9: Advanced e-mail (2 of 4) -- Encoding program files

     Getting a file by e-mail becomes more complicated when you request a
program rather than a document. Programs or other files that contain
unusual characters or lines longer than 130 characters (graphics files,
for example) require special processing by both the mail server to
ensure they are transmitted via e-mail. Then you'll have to run them
through at least one converter program to put them in a form you can
actually use. To ensure that a program or other "non-mailable" file
actually gets to you, include another line in your e-mail message to the
server:

          encoder

This converts the file into an encoded form. To decode it, you'll first
have to transfer the file message into a file in your home directory. If
you are using the simple mail program, go into mail and type

          w # file.name

where # is the number of the message you want to transfer and file.name
is what you want to call the resulting file. In pine, call up the
message and hit your O key and then E. You'll then be asked for a file
name. In elm, call up the message and hit your S key. You'll get
something that looks like this:

          =file.request

     Type a new file name and hit enter (if you hit enter without typing
a file name, the message will be saved to another mail folder, not your
home directory).
     Exit mail to return to your host system's command line . Because
the file has been encoded for mail delivery, you now have to run a
decoder. At the command line, type

          uudecode file.name

where file.name is the file you created while in mail. Uudecode will
create a new, uncompressed file. In some cases, you may have to run it
through some other programs (for example, if it is in "tar" form), but
generally it should now be ready for you to download to your own computer.
     One further complication comes when you request a particularly long
file. Many Net sites can only handle so much mail at a time. To make
sure you get the entire file, tell the mail server to break it up into

smaller pieces, with another line in your e-mail request like this:

            size 100000

    This gives the mail server the maximum size, in bytes, of each file
segment. This particular size is good for UUCP sites. Internet and
 Bitnet sites can generally go up to 300000. When you get all of these
files in mail, transfer them to your home directory. Exit mail and call
up each file in your host system's text processor and delete each one's
entire header and footer (or "signature" at the end). When done with
this, at your host system's command line , type

            cat file1 file2 > bigfile

where file1 is the first file, file2 the second file, and so on. The >
tells your host system to combine them into a new megafile called bigfile
(or whatever you want to call it). You can then run uudecode, tar, etc.
One word of caution, though: if the file you want is long enough that it
has to be broken into pieces, think of how much time it's going to take
you to download the whole thing -- especially if you're using a
 2400-baud modem!

1.4   Chapter 9: Advanced e-mail (3 of 4) -- FTPMAIL

What if the file you want is not on one of these mail servers? That's
where ftpmail comes in. Run by Digital Equipment Corp. in California,
this service can connect to almost any ftp site in the world, get the
file you want and then mail it to you. Using it is fairly simple -- you
send an e-mail message to ftpmail that includes a series of commands
telling the system where to find the file you want and how to format it
to mail to you.
    Compose an e-mail message to

            ftpmail@decwrl.dec.com

    Leave the "subject:" line blank. Inside the message, there are
several commands you can give. The first line should be

            reply address

where "address" is your e-mail address. The next line should be

            connect host

where "host" is the system that has the file you want (for example:
wuarchive.wustl.edu). Other commands you should consider using are
"binary" (required for program files); "compress" (reduces the file size
for quicker transmission) and "uuencode" (which encodes the file so you
can do something with it when it arrives). The last line of your message
should be the word "quit".
    Let's say you want a copy of the U.S. constitution. Using archie,
you've found a file called, surprise, constitution, at the ftp site
archive.cis.ohio-state.edu, in the /pub/firearms/politics/rkba directory.
You'd send a message to ftpmail@decwrl.dec.com that looks like this:

```
            reply adamg@world.std.com
            connect archive.cis.ohio-state.edu
            binary
            compress
            uuencode
            get pub/firearms/politics/rkba/constitution
            quit
```

     When you get the file in your mailbox, use the above procedure for
copying it to a file. Run it through uudecode. Then type

            uncompress file.name

to make it usable.
     Since this was a text file, you could have changed the "binary" to
"ascii" and then eliminated the "uuencode" file. For programs, though,
you'll want to keep these lines.

1.5   Chapter 9: Advanced e-mail (4 of 4) -- SENDING FILES BY E-MAIL

     The uuencode and uudecode programs will also come in handy if you
ever want to send your own files to somebody else.
     If both you and your intended recipient communicate via Unix- based
host systems, then it's pretty easy, because almost all Unix host systems
will have encoder/decoder programs online.
     First, upload the file you want to send to your friend to your
host site. Ask your system administrator how to upload a file to your
name or "home" directory. Then type

            uuencode file file > file.uu

and hit enter. "File" is the name of the file you want to prepare for
mailing, and yes, you have to type the name twice! The > is a Unix
command that tells the system to call the "encoded" file "file.uu" (you
could actually call it anything you want).
     Now to get it into a mail message. The quick and dirty way is to
type

            mail friend

where "friend" is your friend's address. At the subject line, tell her
the name of the enclosed file. When you get the blank line, type

            ~r file.uu

or whatever you called the file, and hit enter. (on some systems, the ~
may not work; if so, ask your system administrator what to use). This
inserts the file into your mail message. Hit control-D, and your file is
on its way!
     On the other end, when your friend goes into his mailbox, she
should transfer it to her home directory. Then your friend should type

            uudecode file.name

and hit enter. This creates a new file in her name directory with
whatever name you originally gave it. She can then download it to her
own computer. Before she can actually use it, though, she'll have to
open it up with a text processor and delete the mail header that has been
"stamped" on it. If you use a mailer program that automatically appends
a "signature," tell her about that so she can delete that as well.
     But what if your friend only connects with a non-Unix system, such
as CompuServe or MCIMail? There are programs available for MS- DOS,
Apple and Amiga computers that will encode and decode files. Of course,
since you can't send one of these programs to them via e-mail (how would
they un-encode it?), you'll have to mail or give them a diskette with the
program on it first.   Then, they can get their message, run it through a
text editor to delete the header, and finally decode the file. If they
want to send you files in return, they'll also want an encoder
     Amiga versions of the programs uuencode and uudecode are available on
 Aminet .
     For MS-DOS machines, you'll want to get uunecode.com and
uudecode.com. Both can be found through anonymous ftp at
wuarchive.wustl.edu in the /mirrors/msdos/starter directory. The MS- DOS
version is as easy to use as the Unix one: Just type

                    uudecode filename.ext

and hit enter.
     Mac users should get a program called uutool, which can be found in
the info-mac/util directory on sumex-aim.stanford.edu.

     Once again, be careful with large files. Although large sites
connected directly to the Internet can probably handle mega-files, many
smaller systems cannot. Some commercial systems, such as CompuServe and
MCIMail limit the size of mail messages their users can receive. Fidonet
doesn't even allow encoded messages. In general, a file size of 30,000
or so bytes is a safe upper limit for non-Internet systems.
     One other thing you can do through e-mail is consult with the
 Usenet Oracle. You can ask the Oracle anything at all and get back an
answer (whether you like the answer is another question).
     First, you'll want to get instructions on how to address the Oracle
(he, or she, or it, is very particular about such things and likes being
addressed in august, solemn and particularly sycophantic tones). Start
an e-mail message to

                    oracle@iuvax.cs.indiana.edu

     In the "subject:" line, type

                    help

and hit enter. You don't actually have to say anything in the message
itself -- at least not yet. Hit control-D to send off your request for
help. Within a few hours, the Oracle will mail you back detailed
instructions. It's a fairly long file, so before you start reading it,
turn on your communications software's logging function, to save it to
your computer (or save the message to a file on your host system's home
directory and then download the file). After you've digested it, you
can compose your question to the Oracle. Mail it to the above address,
only this time with a subject line that describes your question. Expect
an answer within a couple of days. And don't be surprised if you also

find a question in your mailbox -- the Oracle extracts payment by making
seekers of knowledge answer questions as well!