

SAS-L: The Basics

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Abstract. Most SAS® users, both newcomers and veterans, will eventually encounter SAS-L. This discussion group provides help, lively discussions, insights and all manner of incidentals, to the SAS user community. It is gated to the newsgroup comp.soft-sys.sas, so is available to an even wider range of readers. Discussions may be on program optimization, sampling methods, random number generation, operating system problems, practically anything (usually related to SAS).

This paper is not about that.

This paper is about what goes on in the administration of a Listserv®-based discussion group – especially one catering to a technically-oriented, but wildly-divergent community.

Introduction. In general, administering SAS-L or any other mail list is not especially difficult. Occasionally, there will be odd problems of one sort or another. Currently things are quiet. Perhaps too quiet and that situation does not last long. Oh well. In the remainder of this paper, I'll discuss some of the ongoing listadmin kind of stuff I encounter.

Where is SAS-L? SAS-L is a list server based discussion group. It resides on four “peered” list servers:

- Marist University:
listserv@vm.marist.com
- Virginia Polytechnic University
listserv@listserv.vt.edu
- University of Vienna
listserv@akh-wien.ac.at
- University of Georgia
listserv@listserv.uga.edu

These sites are all “peered”, so a post sent to one will be propagated to all. In addition to the list servers, there is also a connection made with the newsgroup comp.soft-sys.sas so the newsgroup and the mail list will generally have all of the same information, though there are some exceptions:

- Both mail and news use the same headers (see Appendix 3 for more information about email headers), but while a “Subject:” header is optional in Mail, it is required in News, so a post sent to SAS-L without a “Subject:” will be rejected by the mail-to-news gateway.
- SAS-L at UGA is configured to remove all non-text attachments. Posts made to the newsgroup may include attachments. The news-to-mail gateway is at UGA, so the attachment is removed as the message moves to the Listserv world.

You may read SAS-L via email, a newsreader or the web. For the latter, there is the web interface to SAS-L provided at UGA:

<http://listserv.uga.edu/>

At this location you may select “sas-l” and read and post as well as perform archive searches (archive searches are discussed in Appendix 4). To post, you will have to “register”; this is to confirm your e-address (but it does not add you to the subscriber list – “subscribing” to SAS-L is a distinct operation and is described below. You must be subscribed if you wish to post to SAS-L at UGA). You may also Use “Google Groups™” (or any newsreader) to access comp.soft-sys.sas. From this you may read, post and perform archive searches.

What are the Archives? SAS-L was established (jointly) at the University of Georgia and Marist University in 1986. All the posts made since are archived at Marist; the UGA archives only go back to 1996. When performing a search, you should always place a bound on your search; for example, all entries on “sql” would be extensive if just done on posts of this year. Without a bound, they would go back to 1996 and the resulting mass of information would be all but useless. For more information on searches, see Appendix 4.

What about SPAM? SAS-L is receiving its share. Sending non-text attachments is prohibited in SAS-L and there is a partial ban on HTML messages. The HTML message problem has several sources, the principal one being the many mailers that sent mail as both text and html. A message sent as text alone will get through. As will a message sent as HTML alone. If a message is sent as both text and HTML, the HTML portion is removed. Non-text attachments have been passed on to SAS-L, but this requires altering the

"MIME-type" information, so such files are unlikely to be opened (correctly) by mailer software. The next release of LSoft's Listserv software (1.8e) will prevent all html, including legitimate messages. Additionally, messages posted by browsers may encounter the same problems. This would end a great deal of spam, but the number of discarded postings would probably be considerable. The question remains open and there is no decision at present.

Are there other methods? SPAM is seen as a threat to the net as a whole. Many efforts are going into devising ways of preventing it. I regret to say I am not optimistic. The ways of reducing or preventing SPAM on SAS-L are not as appropriate now as they were even 5 years ago. Listserv itself attempts SPAM filtering. It has some successes, but not as many as it once did.

Some sites have implemented mail filtering. The idea is to prevent the receipt of a virus (or any executable code) or pornography or some sort of "inappropriate content" including SPAM. The results have been mixed: posts consisting of program code of almost any type (SAS, Perl, Java, etc) will be rejected by a number of sites (JCL does not seem to have this problem), additionally, anyone whose INPUT statement included a variable with the name "SEX", might have that post rejected. At one time many of these products would send a note advising the message had been rejected (and including a reason). Often this was sent to every possible address the software could find: the author, the List, the List owner. The result was indistinguishable from SPAM, and was a nuisance as it cluttered mailboxes. Trojan attacks of the past 18 to 24 months have often simply used mail address that happened to be in the address book of an infected machine. A forged mail header is written indicating this hapless individual sent the mail. But of course, they didn't. The mail was sent from another machine – they just happened to be in an addressbook on that (infected) machine. At this writing, the Trojan du jour is MyDoom, and at this stage, many scanning operations no longer send a response to any address that has sent a suspicious file. Just a few months ago it was a common practice, and there were serious arguments with mail administrators over this.

Can you be removed from the List? Of course. The usual reason is that your mailer no longer accepts mail addressed to you (invalid address). SAS-L can automatically detect and delete some of these, but the administrator has to remove others. Sometimes the problem is temporary, other times it is (or seems) permanent. Another cause for removal is constant returned messages – accompanied with a "mailbox full" message from the mail system. Here is a typical message from hotmail.com:

This is an automatically generated Delivery Status Notification.

Delivery to the following recipients failed.

some_name@HOTMAIL.COM
some_other_name@HOTMAIL.COM

Checking the message that accompanies this will typically show:

Original-Recipient:
Final-Recipient: rfc822;*some_name@HOTMAIL.COM*
Action: failed
Status: 5.2.3
Diagnostic-Code: smtp;552 5.2.3 This message is larger than the current system limit or the recipient's mailbox is full. Create a shorter message body or remove attachments and try sending it again.

Yahoo accounts also will frequently exceed the quota and, as with the Hotmail accounts above, will begin bouncing to the list owner id. A brief delay is usually called for, but after that the account is deleted (and *that* message "You have been deleted from SAS-L" will often be delivered – sometimes prompting a query as to why this was done). Occasionally mail will not be delivered because of "congestion" at the mail server. One can only speculate about the unfortunate mail admins at this point: with the mail queues backed up and mail being bounced, it is not a situation most would want to be in. The causes can be almost anything: hardware, software, mailer configurations, operating systems, the list goes on. Rarely, a mailer will be misconfigured and will begin sending the mail it receives from SAS-L back to SAS-L (one form of a mail loop). These are typically removed at once. "Out-of-Office" ("Vacation") messages sent to SAS-L can also get one deleted (if something is automatically sending messages to SAS-L, it may be regarded as SPAM).

References.

For those who wish to know more about the LSoft's Listserv software, you may want to review the online manuals at <http://listserv.uga.edu/docs.html>
Additionally, LSoft has extensive online manuals available at its own web site
<http://www.lsoft.com/lists/listref.html>

Relevant RFCs may be found at: <http://www.faqs.org/rfcs/> and <http://www.rfc-editor.org/>
In particular:

- RFC 821 - Simple Mail Transfer Protocol
- RFC 822 - Standard for the format of ARPA Internet text messages (more than you want to know about mail headers)
- RFC 2045 through RFC 2049 - Multipurpose Internet Mail Extensions (MIME)
- RFC 2821 - Simple Mail Transfer Protocol (to replace RFC 821)
- RFC 2822 - Internet Message Format (to replace RFC 822)

For an excellent guide to electronic mail, see
Sendmail, 3rd Edition, by Bryan Costales, Eric Allman. Sebastopol, CA: O'Reilly & Associates; 3rd edition (December 2002)

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Appendix 1: Subscribing to SAS-L

To subscribe to SAS-L, send email to one of the list servers on which it resides (Marist, UGA, VaTech, and University of Vienna). I will use the list server at the University of Georgia as an example.

The subscription process begins with email sent to the List server. Here is how "Some One" would subscribe:

```
To      : listserv@listserv.uga.edu
Cc      :
Attchmnt:
Subject :
----- Message Text -----
subscribe sas-l Some One
```

Notice the "Subject:" line is blank. The list server ignores the "Subject:" header; you may put anything you wish here, or nothing. The effect is the same. Also note that no email address is included in the "subscribe" message. The Listserv software will select the email address from the headers it finds. By default, the address used will be specified by the "Reply-To:" header, however, if none is present, the address in the "From:" header will be used.

A short time after this message is sent, you will receive a message in response from the List server (reproduced here in full):

```
Your command:

                SUBSCRIBE SAS-L Some One

has been received. You must now reply to this message (as explained
below) to complete your subscription. The purpose of this confirmation
procedure is to check that the address LISTSERV is about to add to the
list for your subscription is reachable. This is a typical procedure for
high-volume lists and all new subscribers are subjected to it - you are
not being singled out. Every effort has been made to make this
verification as simple and painless as possible. Thanks in advance for
your cooperation.

To confirm the execution of your command, simply point your browser to
the following URL:

                http://listserv.uga.edu/cgi-bin/wa?OK=C402F560&L=SAS-L

Alternatively, if you have no WWW access, you can reply to the present
message and type "ok" (without the quotes) as the text of your message.
Just the word "ok" - do not retype the command. This procedure will work
with any mail program that fully conforms to the Internet standards for
electronic mail. If you receive an error message, try sending a new
message to LISTSERV@LISTSERV.UGA.EDU (without using the "reply" function
- this is very important) and type "ok C402F560" as the text of your
message.

You should only 'confirm' once: if you've already been confirmed and try
again, you'll get an error message saying your confirmation code 'does
not correspond to any pending command' because the request will no longer
be pending.

Finally, your command will be cancelled automatically if LISTSERV does
not receive your confirmation within 48h. After that time, you must start
over and resend the command to get a new confirmation code. If you change
your mind and decide that you do NOT want to confirm the command, simply
discard the present message and let the request expire on its own.
```

This is basically a request that you confirm that you did indeed request to be subscribed to SAS-L. Usually, any of the methods described above will work, but as a failsafe, the last method of sending a second email with the confirmation number should always work. If it does not, you should contact the list owner (at UGA: owner-sas-l@listserv.uga.edu)

Once the List server has received your confirmation, you should receive an automated message from the list owner address (above) telling you that "You are now subscribed to the SAS-L list". It includes a good deal of additional information, including these two items:

To send a message to all the people currently subscribed to the list, just send mail to SAS-L@LISTSERV.UGA.EDU. This is called "sending mail to the list," because you send mail to a single address and LISTSERV makes copies for all the people who have subscribed. This address (SAS-L@LISTSERV.UGA.EDU) is also called the "list address." You must never send a command to that address, as it would be distributed to all the people who have subscribed. All commands must be sent to the "LISTSERV *server* address," LISTSERV@LISTSERV.UGA.EDU.

You may leave the list at any time by sending a "SIGNOFF SAS-L" command to LISTSERV@LISTSERV.UGA.EDU.

The address sas-l@listserv.uga.edu is for mail distribution. The address listserv@listserv.uga.edu is for commands to the Listserver. Including "unsubscribe".

Several default settings are in effect. To see the current settings for your subscription, send this message to listserv@listserv.uga.edu

```
query sas-l
```

The current settings will be sent back. Since this is a new subscription, these are actually the defaults:

```
> query sas-l
```

```
Subscription options for Some One <someone@SOME.ISP>, list SAS-L:
```

```
MAIL           You are sent individual postings as they are received
FULLHDR        Full (normal) mail headers
NOREPRO        You do not receive a copy of your own postings
NOACK          No acknowledgement of successfully processed postings
```

If you wish to receive the list in "Digest" form (a block of about 1000 lines) you could tell the listserver:

```
set sas-l digest
```

"Mail" will become "Digest".

If you would like to see your own posts in SAS-L, send this command

```
set sas-l repro
```

See the Listserver documentation for more about subscription options. To get started, you might send this command:

```
info refcard
```

You will receive a quick reference to the "general user commands".

Appendix 2: Leaving or Temporarily Turning off SAS-L

When you want to leave SAS-L, send this message:

```
signoff sas-l
```

If you expect to be away from email access for a while and do not want to have *many* messages from SAS-L (it can frequently go over 100 posts/day) or are concerned about mailbox limits, you can suspend your

subscription to SAS-L with the command

```
set sas-l nomail
```

When you are away, you should be sure your "vacation" message is not being sent to anyone who posts to SAS-L or (worse) to SAS-L itself. Check with your mail administrator about this. The vacation message may be sent to the list owner id and that will be found in the "Return-Path:" header (see next section for example).

Appendix 3: Email Headers

Email headers are described in RFC 822 (see "References" for information on obtaining a copy). Most mail clients will display only a subset of the full mail headers. A typical post from SAS-L (actually, most email) should display the following headers:

```
Date:  
From:  
Subject:  
To:
```

And maybe "Sender:" and "Reply-To:"

"From:" and "To:" (as well as "Sender" and "Reply-To:") would contain an email address, "Date:" would have the date and "Subject:" would be a text string.

A more complete list of the headers might look more like this (the headers usually displayed are in **bold**)

```
Return-Path: <owner-sas-l@LISTSERV.UGA.EDU>  
Received: from service3.cc.uga.edu (service3.cc.uga.edu [123.456.78.909])  
    by machine1.cc.uga.edu (Central Mail Service ZOS 2.3.5r)  
    with ESMTTP id AKU56212;  
    Sun, 1 Feb 2004 17:29:12 -0500 (EST)  
Received: from stacy.cc.uga.edu (stacy.cc.uga.edu [123.456.78.903])  
    by service3.cc.uga.edu (Central Mail Service ZOS 2.3.5r)  
    with ESMTTP id ALU92853;  
    Sun, 1 Feb 2004 17:28:39 -0500 (EST)  
Received: from listserv.cc.uga.edu (123.456.78.975) by stacy.cc.uga.edu (LSMTP for  
OS/2 ) with SMTP id <2.00ADF13C@stacy.cc.uga.edu>; Sun, 1 Feb 2004 17:28:35 -0500  
Received: from LISTSERV.UGA.EDU by LISTSERV.UGA.EDU (LISTSERV-TCP/IP release  
1.8d) with spool id 2300066 for SAS-L@LISTSERV.UGA.EDU; Sun, 1 Feb  
2004 17:28:35 -0500  
Received: from Mail.research.org (mail.research.org  
[234.567.89.012]) by listserv.cc.uga.edu (8.11.6/8.11.6) with ESMTTP id  
il3MSYB00901 for <SAS-L@LISTSERV.UGA.EDU>; Sun, 1 Feb 2004 17:28:34  
-0500  
Received: from 10.20.10.501 by Mail.research.org with ESMTTP (  
Research.org (MSG v5.01)); Sun, 01 Feb 2004 15:27:51 -0600  
Received: from CENZ01-MTA by CENZ01.research.org with MainMail; Sun,  
01 Feb 2004 15:28:10 -0700  
MIME-Version: 1.0  
Content-Type: text/plain; charset=us-ascii  
Content-Transfer-Encoding: 7bit  
Content-Disposition: inline  
Message-ID: <s0tfx0a.098@CENMTA.research.org>  
Date: Sun, 1 Feb 2004 15:27:43 -0700  
Reply-To: SAS-L Poster <sas-lposter@RESEARCH.ORG>  
Sender: "SAS(r) Discussion" <SAS-L@LISTSERV.UGA.EDU>  
From: SAS-L Poster < sas-lposter@RESEARCH.ORG >  
Subject: A message to SAS-L  
To: SAS-L@LISTSERV.UGA.EDU
```


Obviously, considerably more detailed. In the section above, the headers "Sender:" and "To:" both point to

SAS-L. The "From:" shows who posted the message and the "Reply-To" indicated where any reply should be sent (most mailers offer some choices). Many mailers insert a "Reply-To" header to assure that a reply to regular mail is sent the correct mailbox. The "Received:" headers trace the path the mail took from the original poster to the final recipient. Every step along the way adds another "Received:", the topmost being the last. Although few mailers show these by default, most can display them.

Appendix 4: Searching the Archives

Archive searches may be done via the commands, but by far the easiest way is to use the web interface.

The web Interface (<http://listserv.uga.edu/>):



www.listserv.uga.edu
The University of Georgia

LISTSERV is an electronic mail facility which allows you to participate in electronic discussion groups on thousands of topics. The University of Georgia hosts over 2000 lists for faculty, administrators, and student organizations, in support of the University of Georgia System mission.

[Web-Based Listserv Intro](#)

Fact: Always think before sending any message!

[Browse, Subscribe, Post, Search ...](#)
From this page, you can access UGA's public and private list to browse or search the archives, manage your subscriptions, and post to the list. You can also search worldwide for a LISTSERV list of interest.



[Manage Lists \(for List Owners\)](#)
If you own and manage a list, you can perform related management tasks (be sure to register a LISTSERV password).

[Request a List](#)
Fill out the form to request that a new list be established.

[Manuals and References](#)
Local documentation and FAQ for listowners and subscribers, and links to complete LSoft Listserv documentation.

[Register Your LISTSERV Password](#)
Your LISTSERV password makes working with your lists -- whether you are a subscriber or owner -- very easy.

listserv.uga.edu
[Enterprise Information Technology Services](#)
[The University of Georgia](#)
listhelp@uga.edu

 
LISTSERV Catalist

Selecting "Browse, Subscribe, Post, Search ..." will display a list of all publicly-accessible mail lists at the University of Georgia. Select "SAS-L" and you will see:



www.listserv.uga.edu
The University of Georgia

[Home](#) | [Browse](#) | [Manage](#) | [Request](#) | [Manuals](#) | [Register](#)

Archives of SAS-L@LISTSERV.UGA.EDU

SAS(r) Discussion

[Search the archives](#)
[Post to the list](#)
[Join or leave the list \(or change settings\)](#)
[Manage the list](#) (list owners only)

[February 2004, week 1](#)
[January 2004, week 5](#)
[January 2004, week 4](#)
[January 2004, week 3](#)
[January 2004, week 2](#)
[January 2004, week 1](#)
[December 2003, week 5](#)
[December 2003, week 4](#)
[December 2003, week 3](#)
...

[February 1996, week 2](#)
[February 1996, week 1](#)
[January 1996, week 5](#)
[January 1996, week 4](#)
[January 1996, week 2](#)

Now select "Search the Archives" and you will see:



www.listserv.uga.edu

The University of Georgia

[Home](#) | [Browse](#) | [Manage](#) | [Request](#) | [Manuals](#) | [Register](#)

Search the SAS-L archives

[Help!](#) (or click on highlighted fields for specific help)

[Search for:](#)

apple or pear (green apple) or (red apple)

[Substring search](#)

In messages where:

The [subject](#) is or contains: pie or cake

The [author's address](#) is or contains: granny

Since: [\(date/time\)](#) June 1995

Until: [\(date/time\)](#) 2 May 96

I am searching for "mvs and ods" in posts starting in January, 2002. I am assuming the combination of "MVS" and "ODS" is a rara avis. But it is not entirely (I will display only a portion):

Search results - SAS-L

50 matches (more available).

[Search again](#)

Item #	Date	Time	Recs	Subject
092085	02/01/14	10:09	205	SACRAMENTO VALLEY SAS USERS GROUP WINTER MEETING
092654	02/01/22	06:34	18	Another MVS Question
092674	02/01/22	10:30	27	Re: Another MVS Question
092793	02/01/23	17:03	50	Re: Another MVS Question
093363	02/01/31	12:48	47	Re: Printing from Batch PC SAS
093533	02/02/02	00:19	1627	Re: Web Interface of SAS program

At the time of this writing, there were 72 hits altogether.

It is extremely important to place a time bound on your searches or the resulting mass of information is will simply overwhelm you. SAS-L is a very vigorous mail list, and topics can be discusses in considerable detail.

Appendix 5: Problems Sending and Receiving Mail

Sending Mail. SAS-L at the University of Georgia requires that you be subscribed before you may post (the peered lists are excepted). This was done in response to floods of SPAM and virus notification warnings being sent all over the net. As originally established in Bitnet days, SAS-L remained an open list until only recently, so the fact a subscriber's address might have changed had little effect upon their ability to post and receive mail. This is no longer the case. When you subscribe, the listserver stores your email address, so there should be no problem receiving mail. Plus, since SAS-L did not care about the address of posters, there was no problem posting. That has changed. Now, all posts must come from subscribers. So if your mail systems staff has changed your email address from me@mailgate.corp.com to me@corp.com the Listserver will not know who you are since the names are not the same. Your mail administrators will have made very sure that mail sent to the address at "mailgate.corp.com" is correctly sent to the appropriate address at "corp.com", so it will seem that nothing has changed. But the address on your outbound mail will have changed, and Listserv will not recognize your new address on the mail it receives. The old address will need to be replaced with the new one. It is possible to change the e-address, but the recommended course is to resubscribe, thereby allowing the Listserver pick the correct e-address (sometimes it really is not what you think – or have been told). Contact the list owner about having the old address deleted.

Receiving Mail. Your site may be filtering mail (many, perhaps most sites are these days) and efforts are made to prevent the distribution of SPAM, Trojans, and viruses. Many times mail with "suspicious content" is silently dropped, although sometimes notification is sent to any number of individuals. This last has resulted in mail sent to the List (not good) and elsewhere. Sometimes a message is blocked for no obvious reason. If you believe this is happening to you, consult your mail administrators about placing SAS-L on a "whitelist".