
Subject: Re: SAVE/RESTORE problems

Posted by [rosentha](#) on Thu, 19 Mar 1998 08:00:00 GMT

[View Forum Message](#) <> [Reply to Message](#)

On Thu, 19 Mar 1998 13:07:14 +0000,

R Balthazor <r.balthazor@sheffield.ac.uk> wrote:

> Hello,

>

> I have a pair of routines that worked fine in IDL4.0. The first
> essentially read in some large arrays from a number of datasets, and
> then performed a SAVE,/VARIABLES. The second then performed a RESTORE
> and proceeded to perform various graphical plottings on them. The
> reason it was split into two was that the first routine, reading in the
> variables, took around 15 minutes to read everything in (the many source
> datafiles are HUGE) and I wanted to experiment in the second routine
> with different ways of plotting the output. The size of the idlsave.dat
> file is around 23 Mbytes.

>

> First I .compiled the routines under IDL5.0.2 and ran them. The first
> routine ran fine, loading up the data from the huge datafiles. The
> second crashed out in the following manner.

>

> IDL> TUBEREAD4

> Starting restore...

> % Stopped on unknown instruction(0) at 538298664.

> % Execution halted at: TUBEREAD4 1 tuberead4.pro

>

> The diagnostic "Starting restore..." is a PRINT command immediately
> before the RESTORE, and it doesn't reach the "Ending restore..."
> immediately afterwards so I guess the problem is in RESTORE, even if it
> claims it crashes out at line 1 (which is not the case).

>

> Second try, I simply appended the second routine to the first, removed
> the SAVE,/VARIABLES and the RESTORE (and the spurious END and PRO
> lines), and compiled the whole thing. This ran perfectly, but is less
> than useful because of the time taken to read in before I get any useful
> image/data processing and output done.

>

> I'd be very grateful if anyone can offer any suggestions for how to get
> around this problem.

I've had the same problem. Apparently this is a known bug in IDL v5.x .

The workaround is to ensure that all variables are declared before
the RESTORE command is called. The variables need not be declared with
the correct type or dimensions, just so long as they are assigned some
value e.g. a=0 & b=0 & c=0 etc.

I haven't actually tried this workaround myself, but I have found that

executing the same procedure a second time immediately after the failed RESTORE will work - presumably because all the variable names have now been declared. For your huge RESTORE files the other workaround is probably better.

--

Colin Rosenthal
High Altitude Observatory
Boulder, Colorado
rosentha@hao.ucar.edu

Subject: Re: SAVE/RESTORE problems
Posted by [Liam Gumley](#) on Thu, 19 Mar 1998 08:00:00 GMT
[View Forum Message](#) <> [Reply to Message](#)

R Balthazor wrote:

> I have a pair of routines that worked fine in IDL4.0. The first
> essentially read in some large arrays from a number of datasets, and
> then performed a SAVE,/VARIABLES.
[description of problems deleted]

Richard,

I've always used the following syntax to SAVE variables:

```
SAVE, VAR1, VAR2, ..., VARN, /XDR, FILE = 'idl.sav'
```

and I've never had any problems under IDL 4.0 or 5.0. If you gather your variables into a structure, then all you have to do is SAVE the structure itself, e.g.

```
STRUCT = { Date:VAR1, Time:VAR2, Latitude:VAR3, Longitude:VAR4 }  
SAVE, STRUCT, /XDR, FILE = 'idl.sav'
```

The XDR keyword doesn't seem to add much overhead, and it's tremendously useful to be able to port the save files between platforms (between SGI and Linux for example).

Cheers,
Liam.

