

6.5.2 Restarting SICS

All of SICS can be restarted through the command:

```
monit restart all
```

6.5.3 Starting SICS

An essential prerequisite of SICS is that the server is up and running. The system is configured to restart the SICServer whenever it fails. Only after a reboot or when the keepalive processes were killed (see below) the SICServer must be restarted. This is done for all instruments by typing:

```
monit
```

at the command prompt. `startsecs` actually starts two programs: one is the replicator application which is responsible for the automatic copying of data files to the laboratory server. The other is the SICS server. Both programs are started by means of a shell script called **keepalive**. `keepalive` is basically an endless loop which calls the program again and again and thus ensures that the program will never stop running.

When the SICS server hangs, or you want to enforce an reinitialization of everything the server process must be killed. This can be accomplished either manually or through a shell script.

6.5.4 Stopping SICS

All SICS processes can be stopped through the commands:

```
monit stop all  
monit quit
```

given at the unix command line. You must be the instrument user (for example DMC) on the instrument computer for this to work properly.

6.5.5 Restart Everything

If nothing seems to work any more, no connections can be obtained etc, then the next guess is to restart everything. This is especially necessary if mechanics or electronics people were closer to the instrument then 400 meters.

1. Reboot the histogram memory. It has a tiny button labelled RST. That's the one. Can be operated with a hairpin, a ball point pen or the like.
2. Wait 5 minutes.
3. Restart the SICServer. Watch for any messages about things not being connected or configured.
4. Restart and reconnect the client programs.

If this fails (even after a second) time there may be a network problem which can not be resolved by simple means.

6.5.6 Checking SICS Startup

Sometimes it happens that the SICServer hangs while starting up or hardware components are not properly initialized. In such cases it is useful to look at the SICS servers startup messages. On the instrument account issue the commands:

```
monit stop sicsserver
cd inst_sics
./SICServer inst.tcl | more
```

Replace inst with the name of the appropriate instrument in lower case. For example, from the home directory of the hrpt account on the computer hrpt:

```
cd
monit stop sicsserver
cd hrpt_sics
./SICServer hrpt.tcl | more
```

This allows to page through SICS startup messages and will help to identify the troublesome component. The proceed to check the component and the connections to it.

6.5.7 HELP debugging!!!!

The SICS server hanging or crashing should not happen. In order to sort such problems out it is very helpful if any available debugging information is saved and presented to the programmers. Information available are the log files as written continuously by the SICS server and possible core files lying around. They have just this name: core.pid, where pid is the process identification number. In order to save them create a new directory (for example dump2077) and copy the stuff in there. This looks like:

```
/home/DMC> mkdir dump2077
/home/DMC> cp log/*.log dump2077
/home/DMC> cp core.2077 dump2077
```

The /home/DMC> is just the command prompt. Please note, that core files are only available after crashes of the server. These few commands will help to analyse the cause of the problem and to eventually resolve it.