

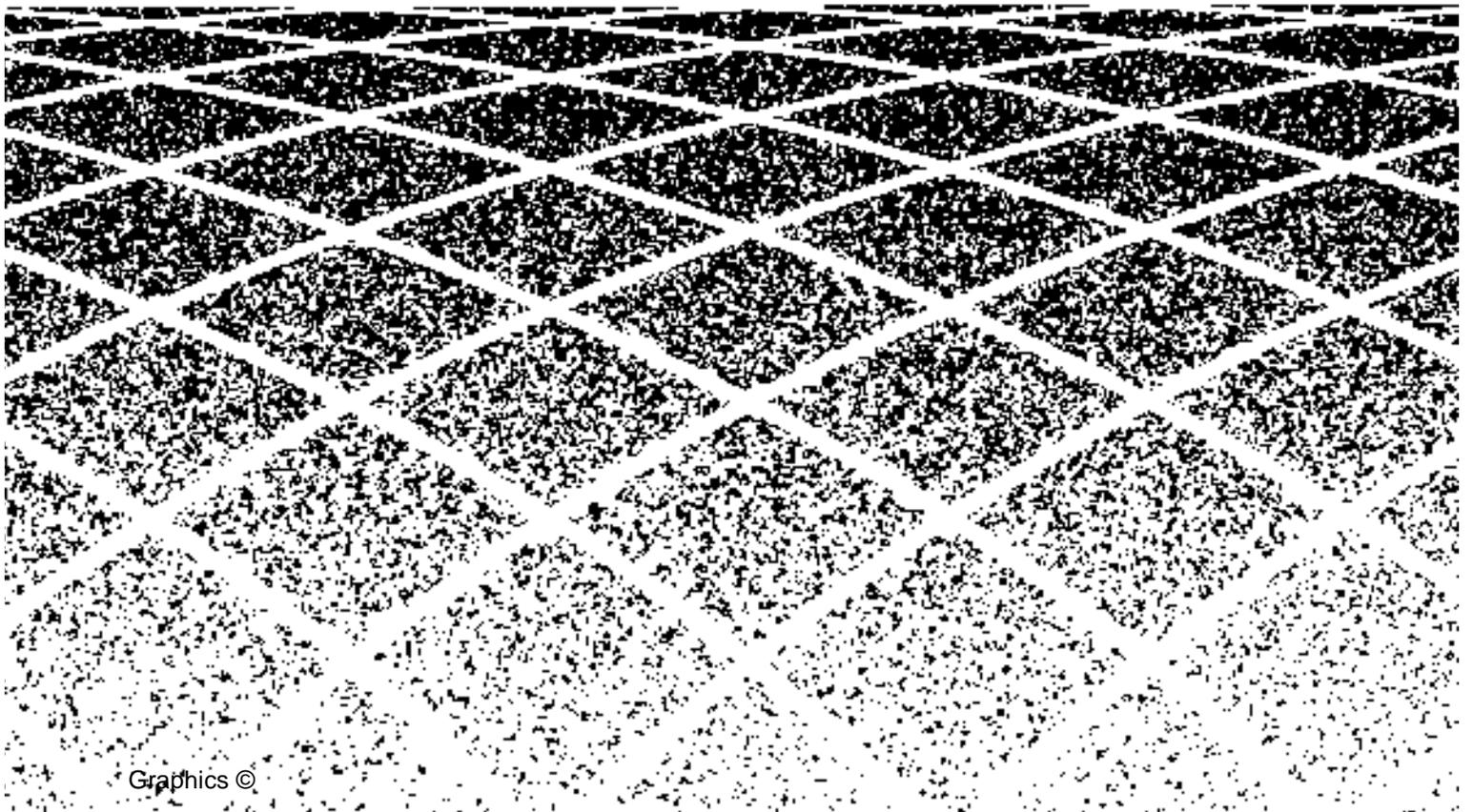


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Conversant VIS Compulert/SCCS



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Introduction

1

CompuLert is a centralized maintenance system for monitoring minicomputers, mainframes, and related devices. The Switching Control Center System (SCCS) is a similar product that supports switching systems and switching system adjuncts. From here forward in this book, CompuLert/SCCS will be referred to simply as SCCS. This SCCS interface is an optional software package for the CONVERSANT Voice Information System (VIS) to enable remote monitoring and administration of the VIS.

The SCCS Link

With the installation of the CompuLert/SCCS interface package, error messages are sent not only to the VIS error log as on the standard VIS, but also to the SCCS link. The data connection between the VIS and the SCCS is a standard serial asynchronous data connection operating at 9600 bps. This same connection also makes it possible to log in to the VIS from the SCCS and monitor or administer the VIS. It also provides for the transmission of a date-and-time "heartbeat" message from the VIS to the SCCS every 15 minutes as an indication of a functional link between the two systems.

The ARU Link

The Compulert/SCCS interface package also supports an optional Alarm Relay Unit (ARU) for local monitoring. The ARU is a microprocessor-based external unit attached to an asynchronous port on the VIS and driven by control character sequences that activate its features. The ARU generates alarms based on error messages sent from the VIS. It provides contact closures for critical, major, minor, and power failure alarms and displays the alarm type (“CRIT” [for “Critical”], “MAJOR,” “MINOR,” or “POWER” on an LED strip on its front panel. You will also see the letter “A” or “B” following the alarm type, depending on whether the VIS is connected to port A or port B on the ARU. The ARU can also sound an audible tone to indicate an alarm condition.

The ARU also features a watchdog timer that displays an alarm message (“WDOGA” or “WDOGB”) and tone if the VIS fails to send the ARU a date-and-time message once every 2 minutes. This would occur, for example, if the voice system is stopped or in the event of a power failure on the VIS. A heavily loaded system that is slow to come up can also cause the watchdog alarm message and tone.

CompuLert/SCCS Hardware Installation

2

Hardware Installation

This section provides instructions for connecting the SCCS/ARU interface to the VIS and testing the connection. Figure 2-1 illustrates the two connectivity plans.

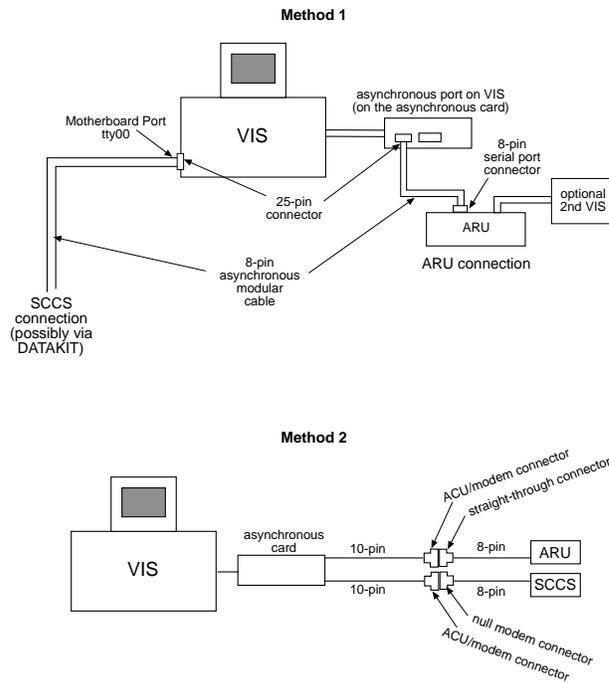


Figure 2-1. VIS and SCCS/ARU Connectivity

Connecting the ARU

1. Ensure that a getty is running at 9600 baud on the VIS port to be connected to the ARU. To check for the presence of a getty, enter

```
ps -ef | grep getty
```

A system response similar to the following indicates that a getty is running at 9600 baud on ttys 1:

```
root 205 1 0 08:08:45 ttys01 0:00 /etc/getty ttys01 9600
```

If a getty is not running or if it is running at the wrong speed, refer to *CONVERSANT Voice Information System Operations* for instructions on setting up the getty correctly.

2. Use asynchronous modular cables to connect the ARU to the VIS. You can connect the ARU directly to an asynchronous port on the VIS or to the IPC-900 card.

⇒ NOTE:

If you are monitoring a single VIS, connect the cable to serial port A on the ARU. Use serial port B for a second VIS if needed. The locations of serial ports A and B on the ARU are shown in Figure 2-3.

- a. To connect the ARU directly to the VIS, use a 25-pin female connector to make a null modem connection to an asynchronous port on the VIS. Use an 8 conductor cable with modular jacks to connect the ARU to the VIS (Figure 2-2).
- b. To connect the ARU to the IPC-900/Gemini-1000 card, use a 10 conductor cable from the card to an ACU/modem adaptor. Use an 8-pin null modem adapter to connect to the 10-pin ACU/modem adaptor. Join the ACU/modem adaptor and the straight-through connector then plug the 8-pin modular jack into the ARU port A or B.

For more information on connecting the ARU, refer to Chapter 4, "Connectivity Diagrams," in the *CONVERSANT Voice Information System System Description*.

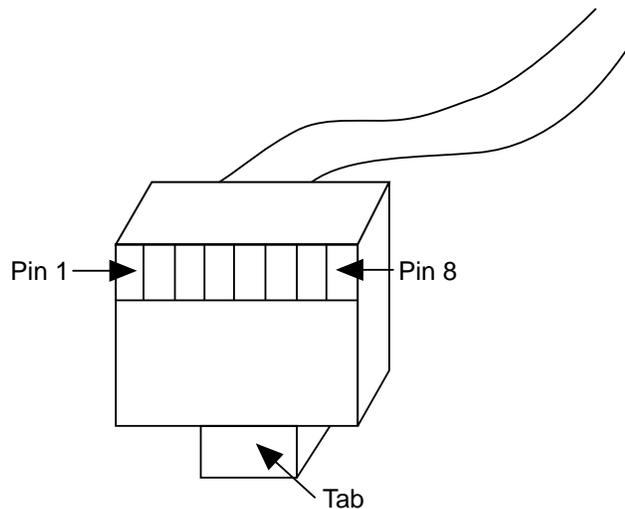


Figure 2-2. 8-Pin Asynchronous Modular Cable Connector

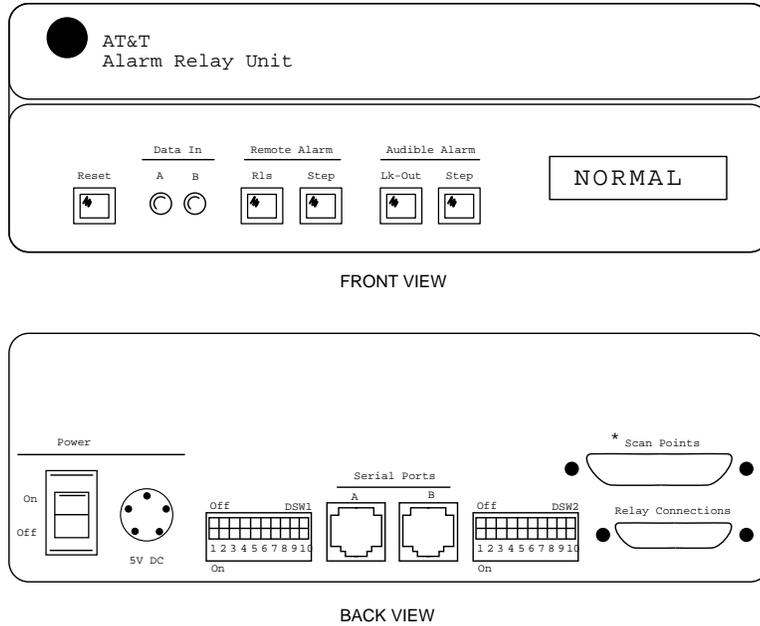


Figure 2-3. Alarm Relay Unit

Setting the Switches on the ARU

The ARU can support two serial devices using the serial ports labeled "A" and "B" in Figure 2-4. The ARU has two banks of DIP switches, labeled "DSW1" and "DSW2" in Figure 2-4. Ensure that DSW1 and DSW2 are both set as shown in Figure 2-4. Table 2-1 describes the functions of these switch settings.

Figure 2-4. ARU Switch Settings for DSW1 and DSW2

The ARU switch settings have the following functions:

Table 2-1. ARU Switch Settings

Switch	Position	Value	Function
DSW1	1	ON	Reset switch is enabled
DSW1	2	OFF	Channel A — one stop bit
DSW1	3–4	ON–OFF	Channel A — even parity
DSW1	5–6	OFF–ON	Channel A — 7 data bits with parity
DSW1	7–10	OFF–ON–OFF–OFF	Channel A — 9600 baud
DSW2	1	ON	ARU can enter download mode from normal mode
DSW2	2	OFF	Channel B — one stop bit
DSW2	3–4	ON–OFF	Channel B — even parity
DSW2	5–6	OFF–ON	Channel B — 7 data bits with parity
DSW2	7–10	OFF–ON–OFF–OFF	Channel A — 9600 baud

Connecting the SCCS

1. An asynchronous data cable can be used to interface the SCCS with the VIS. You can connect the SCCS directly to an asynchronous port on the VIS or to the IPC-900 card.
 - a. To connect the SCCS directly to the VIS, use a 25-pin female connector to make a null modem connection to an asynchronous port on the VIS. Use an 8 conductor cable with modular jacks to connect the ARU to the VIS (Figure 2-2).

NOTE:

The SCCS can also be connected through tty01.

- b. To connect the SCCS to the IPC-900/Gemini-1000 card, use a 10 conductor cable from the card to an ACU/modem adaptor. Use an 8-pin null modem adapter to connect to the 10-pin ACU/modem adaptor. Join the ACU/modem adapter and the straight-through connector then plug the 8-pin modular jack into the SCCS port A or B.

⇒ NOTE:

If the SCCS is not available for complete testing, you can perform an initial check of the SCCS-to-VIS connection. Connect an asynchronous (“dummy”) terminal set at 9600 baud with a null modem into the VIS asynchronous port assigned to the SCCS. If the connection is working, you will see the machine name, date, and time.

For more information on connecting the SCCS, refer to Chapter 4, “Connectivity Diagrams,” in the *CONVERSANT Voice Information System System Description*.

Software Installation

3

Software Installation

There are three parts to installing the CompuLert/SCCS interface:

- Installing the software package
- Setting up the serial port(s)
- Testing the ARU and SCCS connections

This chapter provides procedures for completing all of these steps.

Installing the Software

1. Insert the floppy disk labeled “CompuLert/SCCS Interface Package” into the floppy disk drive.
2. Enter **installpkg** at the UNIX system prompt (#). You’ll need to be logged in as root to do this operation.

System response:

```
Please enter which port {SCCS} will monitor:  
Type <RETURN> if NONE or device name, for example,  
tty00.
```

3. Enter the name of the port the SCCS will monitor.

System response:

Please enter which port {Alarm Relay Unit} will monitor:
Type <RETURN> if NONE or device name, for example, tty00.

4. Enter the name of the port the ARU will monitor. If there is no ARU connection, enter the same port you used for SCCS.

System response:

Please enter the name this machine is identified by:

(This name is usually the UNIX name of the machine.)

5. Enter the machine identification name.

System response:

The installation of the CompuLert/SCCS Interface Package is now complete.

⇒ NOTE:

With the CompuLert/SCCS interface package installed, all messages generated by the CONVERSANT VIS system with alarm levels of major, minor, or critical are automatically directed to the CompuLert or SCCS system; informational messages are not. To add or delete the SCCS destination to or from any system message, refer to "System Message Administration" in Chapter 3, "Configuration Management," of *CONVERSANT Voice Information System Operations*.

Continue with the next section, "Setting Up the Serial Port(s)."

Setting the Serial Port(s)

⇒ NOTE:

Refer to *CONVERSANT Voice Information System Operations* for detailed information on setting up the serial port(s).

1. Enter **face** at the UNIX system prompt (#). The system responds with the AT&T FACE menu.
2. From the System Administration window, select Peripherals Setup. The system responds with the Peripherals Setup menu.
3. From the Peripherals Setup menu, configure the tty port as a standard terminal connection to be used for the SCCS link at a rate of 9600 baud.
4. Select Serial Ports Setup. The system responds with the Serial Ports Setup menu.
5. Set the Device field to TERM.

6. Set the Device Speed field to 9600.
7. Set the Flow Control field to Soft.
8. Save your changes and exit this menu so that you are back at the Peripherals Setup menu.
9. From the Peripherals Setup menu, configure the baud rate to be used for the ARU link on a separate tty port as 9600.
10. Select Serial Ports Setup. The system responds with the Serial Ports Setup menu.
11. Set the Device field to TERM.
12. Set the Device Speed field to 9600.
13. Set the Flow Control field to Soft.
14. Save your changes and exit this menu so that you are back at the Peripherals Setup menu.
15. Exit from face so that you are back at the UNIX prompt.
16. After exiting from face, enter **cd /etc/conf/init.d**
17. Enter **ls -l ua_***

You will find that face has created one file of the form **ua_*tty***, for example **ua_*ttys01***, for each port you configured.

18. Edit each of these files. The contents will be of the following form:

l *nn* :23:respawn:/etc/getty *tty* 9600

where *nn* is the two digit ID and *tty* is the name of the tty port. You need to change the **:23:** to **:234:** so that the getty will be active at level 4, the level used by the VIS system as well as at levels 2 and 3, which is the normal default.

19. Once you have modified the run levels for each port file, incorporate them into the system by entering **/vs/bin/util/mkitab**

This causes */etc/inittab* to be rebuilt and the **init** process to be informed of the changes.

Continue with the next section, "Testing the ARU and SCCS Connections."

Testing ARU And SCCS Connections

Use the following procedure to create test error messages and send them to the ARU and the SCCS port and to test the operation of monitor mode from the SCCS.

Ensure that you have root permissions to execute this procedure:

1. Ensure that you have downloaded the ARU. For the complete procedure, refer to the **load_aru_b** or **load_aru_c** commands in Chapter 4, "SCCS/ ARU Administration Commands."
2. Send a test message for errors of each severity level; that is minor, major, and critical. To send a test error message, enter

logit -p *priority* -d 0x80 "*message*"

where *priority* is the severity level of the error and *message* is a description of the error, as shown in the following examples:

- logit -p minor -d 0x80 "voice processing failure"
- logit -p major -d 0x80 "cannot save system configuration data to hard disk"
- logit -p critical -d 0x80 "VIS unable to communicate with T1 cards"

⇒ NOTE:

For more information, refer to the **logit** command in *CONVERSANT Voice Information System Command Reference*.

3. Check the SCCS and the ARU for the correct error indications according to the test message you sent. (Ask the SCCS administrator for instructions if you do not know how to check the SCCS.)
4. To further test the SCCS connection, enter monitor mode from the SCCS terminal. You will see the UNIX system prompt (#) and if the SCCS connection is working, you will be able to access the VIS and enter VIS commands. (Ask the SCCS administrator for instructions if you do not know how to enter monitor mode.)

SCCS/ARU Administration Commands

4

This section contains an alphabetical list of VIS commands most commonly used to administer/configure the SCCS/ARU interface. Each command entry contains a brief summary of the command's function, the format of the command line entered by the user, a description of the purpose and effect of the command, and cross-references to related commands.

assign_tty

Synopsis

This command specifies which serial port to use for SCCS monitoring and for the ARU.

Command Format

This command permits the user to alter the ports assigned to be monitored by the SCCS and ARU. The command prompts for a device for each. Respond to the prompt with the device name; for example, tty00 or tty01.

The SCCS port and the ARU port can be the same port if the proper cabling is available. However, for greater reliability, it is recommended that you use separate ports.

⇒ NOTE:

If the port to which you assign the SCCS or ARU has a getty entry in **/etc/inittab**, it will be turned off. That is, the old getty entry is turned off. A new getty entry is needed.

Example

assign_tty

chg_machname

Synopsis

This command changes the name of the machine the SCCS is monitoring.

Command Format

chg_machname

Description

This command allows you to change the name of the machine that the the SCCS is monitoring. This name is used in the header of the messages sent to SCCS. You will be prompted for the name of the machine. Use this command if an error occurred during installation in entering the name of the machine or if the current machine name is unknown.



NOTE:

You must stop and restart the VIS for the change to take effect in your system.

Example

chg_machname

console_off/console_on

Synopsis

These commands turn the flow of error messages to the console off and on during system operation.

Command Format

console_off

console_on

Description

Output to the console from the CompuLert/SCCS interface package is normally disabled and handled directly by the VIS error logging system. However, if you set the `CONSOLE_OUTPUT_DEFINED` parameter in the default parameter file to *TRUE*, you can use the **console_on** and **console_off** commands to turn the flow of error messages to the console off and on during system operation. See Chapter 5, "Changing the CompuLert/SCCS Interface Parameters," for instructions on changing the `CONSOLE_OUTPUT_DEFINED` parameter.

Examples

console_off

console_on

load_aru

Synopsis

These commands are used to download the parameter settings of the ARU.

Command Format

load_aru_b

load_aru_c

Description

These commands are used to load the permanent parameter settings into the ARU associated with this system. This command should only have to be issued when the ARU is initially installed or if there is reason to believe that the settings have become corrupted. The ARU retains its settings even when powered down.

Two models of the ARU are available. These models require different initialization settings and self-retire alarms at different rates of speed. The form of the command you use depends on the model. Check the 8-digit model identification number in the upper left-hand corner of the back of the ARU. If it includes the letter "B," use the **load_aru_b** form of the command. If it includes the letter "C," use the **load_aru_c** form. The C model also includes a scan points connector on the right of the back panel that is not found on the B model (see Figure 2-3).

There are two settings files that can be downloaded. The default set makes minor alarms self-retiring, but not critical and major alarms. The retire set makes all three alarm types self-retiring. When you are prompted for the settings file option, enter the file name exactly as presented on the screen; for example, **aru_dflt_b** or **aru_retire_b** for the B model and **aru_dflt_c** or **aru_retire_c** for the C model.

To retire an alarm manually, use the **retire** command or push the release (RLS) button on the front panel of the ARU.

Examples

`load_aru_b`

`load_aru_c`

See Also

`retire`

retire

Synopsis

This command is used to retire critical and major alarm indications on the ARU.

Command Format

retire

Description

Use this command to send appropriate control sequences to the ARU to retire any critical or major alarm indications.

Example

retire

See Also

wdog_reset

wdog_off

Synopsis

This command disables the watchdog timer function of the ARU.

Command Format

wdog_off

Description

This command sends control sequences to the ARU that disable the watchdog timer function. When the watchdog is disabled, an asterisk (*) does not appear on the LED display next to the word "NORMAL."

The watchdog timer should be reenabled with the **wdog_on** command prior to placing the system back into service. The timer should not be disabled for an operational system.

Example

wdog_off

See Also

wdog_on

wdog_on

Synopsis

This command enables the watchdog timer function of the ARU.

Command Format

wdog_on

Description

This command sends control sequences to the ARU to enable the watchdog timer function. When the timer is enabled, the ARU shows an asterisk (*) next to the word "NORMAL" in its LED display.

Use this command to reenable the watchdog timer after it was disabled with the **wdog_off** command.



NOTE:

The watchdog timer should always be enabled for any operational system.

Example

wdog_on

See Also

wdog_off

Changing the CompuLert/SCCS Interface Parameters

5

A standard options file controls a number of parameters of the sccsDaemon process. This appendix describes some key parameters where changes are most likely to be desired.

The following table describes some of the key dynamic options of the sccsDaemon process which you can change by editing the file **/vs/etc/default/sccsDaemon**. Before making any changes to this file, make a copy of the original and name it differently.

Table 5-1. Dynamic Options of the sccsDaemon Process

Option	Description	Default
CONSOLE_OUPUT_DEFINED	Used to route messages going to the SCCS device to also to the console.	FALSE
CONSOLE_DEVICE	The name of the device or file to which console messages are to be directed.	/dev/console
ARU_ENABLED	Enables sending of alarm messages and watchdog reset messages to the ARU (this parameter can be disabled entirely when there is no ARU).	TRUE
SCCS_MODES	The stty command used to condition the line to the SCCS.	stty sane 9600 erase '^h' echoe echok
ARU_MODES	The stty command used to condition the line to the ARU.	stty same 9600 erase '^h' echoe echok

⇒ NOTE:

After changing any parameter, you must restart the daemon process if the system is running. This restart is not necessary if the voice system is stopped. To restart the daemon process, enter

`/vs/bin/vrs/sccsDaemon -c quit`