

osmo-remsim - Feature #4332

call external script from remsim-client to execute specific actions

12/16/2019 07:53 AM - laforge

Status:	Resolved	Start date:	12/16/2019
Priority:	Low	Due date:	
Assignee:	laforge	% Done:	80%
Category:	remsim-client		
Target version:			
Spec Reference:			
Description			
There are some situations where remsim-client would want to make its environemnt aware of, e.g. to take specific action.			
This is particularly important on platforms where the simtrace2 firmware doesn't have direct control over modem reset/poweron or the like.			

Associated revisions

Revision c6a86978 - 12/17/2019 12:49 PM - laforge

Introduce helper functions for safe fork+exec of processes

In some situations, we want to execute an external shell command in a non-blocking way. Similar to 'system', but without waiting for the child to complete. We also want to close all file descriptors ahead of the exec() and filter + modify the environment.

Change-Id: Ib24ac8a083db32e55402ce496a5eabd8749cc888

Related: OS#4332

History

#1 - 12/16/2019 10:35 PM - laforge

- Checklist item [x] generic mechanism to call related script (non-blocking, in separate process) set to Done
- Status changed from New to In Progress
- % Done changed from 0 to 30

first part of the task implemented in <https://gerrit.osmocom.org/c/libosmocore/+/16619>

#2 - 12/17/2019 12:05 AM - laforge

- Checklist item [x] command: sim local vs. remote set to Done
- Checklist item [x] command: modem reset active/inactive set to Done
- Checklist item [x] event: modem asserts/releases SIM RST set to Done

I'm working with a patch that calls an external binary with a single argument and the following environment:

```
REMSIM_SIM_RST=0
REMSIM_CLIENT_VERSION=0.2.2.30-283e
REMSIM_SERVER_STATE=CONNECTED
REMSIM_EVENT=event-modem-status
REMSIM_CLIENT_SLOT=1:0
REMSIM_USB_PATH=1-2.1
REMSIM_SIM_VCC=1
REMSIM_BANKD_ADDR=127.0.0.1:9999
REMSIM_BANKD_STATE=CONNECTED
REMSIM_SERVER_ADDR=127.0.0.1:9998
REMSIM_BANKD_SLOT=1:0
```

The following arguments can occur:

- **event-server-connect**
remsim-client informs the system a logical RSPRO connection from client to server has been established
- **event-bankd-connect**

remsim-client informs the system a logical RSPRO connection from client to bankd has been established

- **event-config-bankd**
remsim-server has configured a (new) bankd/slot to connect to
- **event-modem-status**
themsim-client informs the system that the modem has switched on/off either VCC or RST of the SIM interface
- **request-card-insert / request-card-remove**
remsim-client requests the system to simulate card-insert / card-removal to the modem
- **request-sim-remote / request-sim-local**
remsim-client requests the system to witch between remote and local SIM
- **request-modem-reset**
remsim-client requests the system to perform a modem reset

In terms of the environment, the following variables have been specified so far

Variable	Description
REMSIM_CLIENT_VERSION	compile-time version of the remsim-client software
REMSIM_SERVER_ADDR	remsim-server host:port
REMSIM_SERVER_STATE	state of the rspro_client_fsm connecting to remsim-server
REMSIM_BANKD_ADDR	remsim-bankd host:port
REMSIM_BANKD_STATE	state of the rspro_client_fsm connecting to remsim-bankd
REMSIM_CLIENT_SLOT	ClientId:SlotNr
REMSIM_BANKD_SLOT	BankId:SlotNr
REMSIM_USB_PATH	physical USB path of the SIMtrace2 USB device
REMSIM_USB_INTERFACE	interface number within the SIMtrace2 USB device
REMSIM_SIM_VCC	whether or not the SIM card VCC is turned on by modem (1=on, 0=off)
REMSIM_SIM_RST	whether or not the SIM card RST is active (1) or inactive (0)
REMSIM_EVENT	the name of the event/request (same as first argument passed to script)

#3 - 12/17/2019 12:19 AM - laforge

- % Done changed from 30 to 80

actual implementation in <https://gerrit.osmocom.org/c/osmo-remsim/+/16629>

#4 - 02/19/2020 07:23 PM - laforge

- % Done changed from 80 to 90

the related patch has meanwhile been merged master. However, FSM state change events are still missing.

#5 - 03/04/2020 09:05 PM - laforge

- Priority changed from High to Low

- % Done changed from 90 to 80

#6 - 02/06/2021 08:51 AM - laforge

- Status changed from In Progress to Resolved

script execution on FSM state changes are not really needed so far, so let's skip that for now until somebody actually comes up with a use case. All other events are implemented.

#7 - 08/24/2021 04:43 PM - daniel

Looking at the sources no request-sim-local or request-card-remove can ever occur:

```
$ git grep call_script
src/client/main_fsm.c:static int call_script(struct bankd_client *bc, const char *cause)
src/client/main_fsm.c:    call_script(bc, "event-server-connect");
src/client/main_fsm.c:    call_script(bc, "event-bankd-connect");
src/client/main_fsm.c:    call_script(bc, "request-card-insert");
src/client/main_fsm.c:    call_script(bc, "request-sim-remote");
src/client/main_fsm.c:    call_script(bc, "request-modem-reset");
src/client/main_fsm.c:    call_script(bc, "event-config-bankd");
```

```
src/client/main_fsm.c:      call_script(bc, "event-modem-status");
```

This should at least be pointed out in the docs