Setting up GSM-board (GSM-card) ISA/PCI for Asterisk

Configuration of channels

All settings for GSM-card ISA/PCI (4-channel/8-channel) are located in file eggsm.conf (by default in directory /etc/asterisk). Configuration file consist of: a) "General" category part and b) categories related to single channels.

Categories

Common category [general] contains symbolic names of trunks (groups) of channels:

....
[general]
trunk=trunk_name1
trunk=trunk_name2
....
trunk=trunk_nameN
....

By default, (if groups of channels are not set) all channels make one general trunk (group). Name of trunk is used for defining direction of outbound calls in configuration file extensions.conf. Also the name of trunk is used in channel configuration description.

Channel settings located in individual categories. Symbolical name of channel to be wrote in square brackets [ ] as follows:

....
[channel_name1]
....

Variables

In this category available following variables of configuration:

device
Syntax: device = "board_type" : board_number : channel_number
Example: device=ISA:0:0

Variable "device" defines "geographical" location of channel by board type "board_type"={"ISA","PCI"}, board number "board_number"={0-3} and channel number "channel_number"={0-7}. Numbering of ISA and PCI boards is individual. Maximal quantity of boards allowed per one device: ISA = 4, PCI = 4, together ISA + PCI = 8.

enable
Syntax: enable = boolean
Example: enable=no

Value of this variable "enable" defines state of channel "turned on/turned off" on Asterisk startup or startup of chan_eggsm.so module.

Incoming & incomingto
Syntax: incoming = incoming_type
Example: incoming=spec ;deny,spec,last,dtmf

Syntax: incomingto = extension
Example: incomingto=90210

Variable "incoming" defines the way incoming calls being processed (passed through). "incoming_type"={"deny", "dtmf", "spec", "last"}. Value "deny" denies incoming calls on this channel — to GSM-operator and send "subscriber is busy" signal. "dtmf" — setup scenario of two-step number dial of called subscriber: establishing connection to Asterisk and DTMF additional dial of required extension. Value "spec" — defines passing through of incoming call to extension, set in variable "incomingto". Defining of variable "incoming_type"={"last"} allows to pass incoming call from external subscriber to the local extension from which the external subscriber was dialed before.

outgoing
Syntax: outgoing = outgoing_type
Example: outgoing=allow ; allow, deny

Variable "outgoing" defines allowance for passing through outbound calls on this channel. "outgoing_type"={"deny", "allow"}

trunk
Syntax: trunk = trunk_name
Example: trunk=umc
Variable " trunk" allows to add channel to group (trunk) previously defined in category [general].

trunkonly
Syntax: trunkonly = boolean
Example: trunkonly=no

Variable "trunkonly" denies use of channel out of trunk (to be taken in account when configuring extension).

callwait
Syntax: callwait = boolean
Example: callwait=yes

Variable "callwait" defines option of "second line" inbound call awaiting followed by its passing through according to setup for passing inbound calls.

balancereq
Syntax: balancereq = "balance_request_string"
Example: balancereq=*101#

Variable "balancereq" defines USSD-string for checking balance of SIM-card installed on channel.

Example of channel configuration:

```
...................
[general]
trunk=mts
...................
[chan_mts_05]
device=ISA:0:5
enable=yes
incoming=spec
incomingto=1011
outgoing=allow
trunk=mts
trunkonly=yes
callwait=no
```

balancereq=*101#

Configuration of extension with GSM-board channel

To pass inbound call through channels of GSM-board ISA/PCI gsm8ch, it is necessary to specify parameter "Technology=EGGSM" in "Dial" application. In such case "extensions.conf" to be added with string:

....
exten => someexten,priority,Dial(EGGSM/${EXTEN})
....

If necessary to setup outbound calls through certain channel — accompany "Dial" settings with CH[channel] before "extension" info. Parameter "channel" – symbolic name of channel defined in configuration file "eggsm.conf".

Example: exten => someexten,priority,Dial(EGGSM/**CH[channel]**/${EXTEN})

The same way to setup outbound call through the trunk — need to specify TR[trunk] before extension in "Dial" settings.

Parameter "trunk" – is a symbolic name of trunk defined in configuration file eggsm.conf.

Example: exten => someexten,priority,Dial(EGGSM/TR[trunk]/${EXTEN})