Hinweis für die Textformat-Version; um diese Version im PDF Format zu lesen, laden Sie bitte https://www.dk1ri.de/myc/Rules_device.txt

Rules-device RU

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This paper is published in https://github.com/dk1ri as well

Introduction

This paper describes some ideas for the rules-device. There is no program for this up to now!

Definitions and formats

see https://dk1ri.de/myc/Definitions.txt or https://dk1ri.de/myc/Definitions.pdf

Some explanation

The Rules-device should do the following:
- Provide “R”-rules for dependencies between different devices. The rules may created via an appropriate user interface.
- Create “R” rules for system wide commands.
- Provide rules for the user management: create “Q” rules.
- Check login requests

The generation of rules can be done by the GUI of the program or as a website, which is the preferred mode and will be implemented first. Generation of rules by commands may be implemented later. The announce-list of the RU is different for both modes.
The RU behaves as a FU but can send some commands to the CR as a SK.
Now the RU will ask the CR for sending the announce-list. So it will send the basic and the “xfxxxf0” command.

For simplicity of usage and editing the internal storage and command handling uses “device dependent commands”.

The RU read the full announce-list from the CR and split it to devices by identifying the basic (“m”) commands, and create the rules by using device command identifiers.

So the internal data of the rules need not to be changed if the full announce-list of the CR is changing. The sequence and number of commands within a device is not modified by the CR

The communication with the CR uses command-token of the announce-list from the CR

“R” rules

“R” rules describe the dependencies between different devices and system wide commands. “R” rules using own commands of CR, RU, LD or SK are not allowed.
For details of rules see https://dk1ri.de/myc/Rules.txt or https://dk1ri.de/myc/Rules.pdf.

“Q” rules

Q rules are used for user management.
As default the command-router allow all commands for all users, but this can be changed to forbid users to send commands to specific devices or to send specific commands. This is done by “Q” rules. “Q” are provided by the RU.
The access to the RU device by commands is handled in the same way as for other devices: users can use the commands or it is forbidden.
The RU itself is a device with few commands. These commands are part of the full announce-list of the CR. So the SK can use them.
The RU has one admin account: “admin”. name and password can be changed.
The syntax of “Q” rules is described in https://dk1ri.de/myc/Rules.txt or https://dk1ri.de/myc/Rules.pdf.

Basic RU announcements

The RU should have the following announcements for communication with CR or SK

commands to transfer rules from RU to CR

1;aa.NUMBER_OF_RULES;b;22;CHAPTER,ADMINISTRATION read actual number of rules

2;an.ALL_RU_RULES;255 ;CHAPTER,ADMINISTRATION read all rules; the CR will always read all rules, after finding out the number of rules.

Login command, request by SK (user); also for admin account
251;ob,LOGON;b,mode;<s>,name;<s>,password

3;as,LOGON_ANSWER;0,idle;1,granted;2,denied
After a LOGON request by the user the CR ask the RU for this result.

For details of the login command see https://dk1ri.de/myc/Reserved_tokens.txt or https://dk1ri.de/myc/Reserved_tokens.pdf

Additional RU announcements for editing rules by the user

These rules must use commandtoken as given by the full announce-list.
These commands are used by the user, not by CR:
Rules can be read by the SK using the 0xxxf0 command.
Caution, generating rules may be not easy and error prone!

one rule can be sent at a time
4;ob,R_RULES;b<position>;100,<R_rule>
This allow up to 256 rules while a length <=100 (can be changed)

one answer command can be added at a time
5;ob,ANSWER;w,<RU token>;w,<related token> RU token must be unique and > 11. It will be added to the RU announcelist

as command 4 but for “Q” rules:
“Q” rules are identified by number. Empty positions can be used for new rules
6;om,Q_RULES;b,position;500<Q_rule>
This allow up to 256 rules while a length <= 500 (can be changed)

The following commands are allowed for the “admin” only, The define the access to the RU commands.

Each token must be send individually. “m” token means all device, “c” token means complete CR
7;ob,ALLOW_R;<s>,username

as above, but disallow user:
8;ob,DENY_R;<s>,username

allow a user to create “Q” rules:
9;oa,ALLOW_Q;<s>,username

as above, but disallow user:
10;oa,DENY_Q;<s>,username

read number of users
11;aw,NUMBER_OF_USERS

read all usernames with allowed access; usernames are limited to 100 characters and max 1000 users (can be changed):
Format: username;R|-;Q|-
11;an,R_Q_OF_USERNAME;100, 1000

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Reference

[1] https://dk1ri.de/myc/MYC.pdf (german)
[2] https://dk1ri.de/myc/MYC.en.pdf
[3] https://dk1ri.de/myc/Description.txt or https://dk1ri.de/myc/Description.pdf
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