Rivendell Interprocess Communication Protocol

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Overview

This defines the IP protocol used for communication between different modules of Rivendell and the **ripcd**(8) daemon.

Connection to ripcd is by means of a TCP SOCK_STREAM connection to TCP port **5006**. The format of a message is as follows:

cmd-code [*arg*] [*...*]!

cmd-code	A two letter command code, describing the generic action to be performed
arg	Zero or more arguments, delimited by spaces or, if the last argument, by ! (see below)
!	The ASCII character 33, indicating the end of the command sequence.

Unprivileged Commands

No authentication is required to execute these.

Drop Connection

End the session and drop the TCP connection.

DC!

Send Password

Send a password to the server for authentication.

PW *passwd*!

passwd A password to be supplied before granting the client access.

ripcd(8) will respond with PW +! or PW -!, indicating the success or failure of the authentication.

Privileged Commands

A connection must be authenticated before these can be executed.

Request User

Request the LOGIN_NAME of the user currently logged in.

RU!

ripcd(8) will respond with RU *user-name*!.

user-name The LOGIN_NAME of the user currently logged in.

Set User

Login in a user.

SU *user-name*!

ripcd(8) will respond with RU *user-name*!.

user-name The LOGIN_NAME of the user to log in.

RML Send

Send an RML command to a specified host.

MS *ip-addr echo rml*!

ip-addr IPv4 address of the destination, indotted-quad notation.

echo **1** = Request echo, **0** = Request no echo.

rml The RML command to send.

RML Echo

Echo an RML command to a specified host.

ME *ip-addr echo rml*!

ip-addr IPv4 address of the destination, indotted-quad notation.

echo **1** = Request echo, **0** = Request no echo.

rml The RML command to send.

Get GPI Carts

Return current GPI line cart numbers.

GC *matrix*!

Request the list of macro carts currently assigned for *matrix*. The following record will be returned for each line in the matrix:

GC *matrix gpi-line off-cart-num on-cart-num*!

matrix The specified matrix number.

gpi-line The GPI line number.

off-cart-num The number for the cart to be activated when *gpi-line* transitions to an OFF state. 0 indicates that no cart is currently set.

on-cart-num The number for the cart to be activated when *gpi-line* transitions to an ON state. 0 indicates that no cart is currently set.

Get GPO Carts

Return current GPO line cart numbers.

GD *matrix*!

Request the list of macro carts currently assigned for *matrix*. The following record will be returned for each line in the matrix:

GC *matrix gpo-line off-cart-num on-cart-num*!

matrix The specified matrix number.

gpo-line The GPO line number.

off-cart-num The number for the cart to be activated when *gpo-line* transitions to an OFF state. 0 indicates that no cart is currently set.

on-cart-num The number for the cart to be activated when *gpo-line* transitions to an ON state. 0 indicates that no cart is currently set.

Get GPI States

Return current GPI states.

GI *matrix*!

Request the list of current GPI states for *matrix*. The following record will be returned for each line in the matrix:

`GI` *`matrix gpi-line state mask`*`!`

matrix The specified matrix number.

gpi-line The GPI line number.

state `1` = GPI is ON, `0` = GPI is OFF.

mask `1` = GPI is ENABLED, `0` = GPI is DISABLED.

Get GPO States

Return current GPO states.

`GO` ***`matrix`*****`!`**

Request the list of current GPO states for *matrix*. The following record will be returned for each line in the matrix:

`GI` *`matrix gpo-line state mask`*`!`

matrix The specified matrix number.

gpo-line The GPO line number.

state `1` = GPO is ON, `0` = GPO is OFF.

mask `1` = GPO is ENABLED, `0` = GPO is DISABLED.

Get GPI Mask States

Return current GPI mask states.

`GI` ***`matrix`*****`!`**

Request the list of current GPI mask states for *matrix*. The following record will be returned for each line in the matrix:

`GI` *`matrix gpi-line mask`*`!`

matrix The specified matrix number.

gpi-line The GPI line number.

mask `1` = GPI is ENABLED, `0` = GPI is DISABLED.

Heartbeat

Verify the TCP network connection.

`HB!`

Request a heartbeat response from the **ripcd**(8).

ripcd(8) will respond with `HB!`.

Get GPO Mask States

Return current GPO mask states.

`GM` *`matrix`*`!`

Request the list of current GPO mask states for *`matrix`*. The following record will be returned for each line in the matrix:

`GN` *`matrix gpo-line mask`*`!`

`matrix` The specified matrix number.

`gpo-line` The GPO line number.

`mask` `1` = GPO is ENABLED, `0` = GPO is DISABLED.

Reload GPI Table

Reload the GPI table in **ripcd**(8).

`RG!`

Get OnAir Flag

Request the state of the OnAir flag.

`TA!`

The following record will be returned:

`TA`*`state`*`!`

`state` `1` = Active, `0` = Disabled.

Process Notification

Send or Receive an Object Notification

`ON` *`notify`*`!`

Send the *`notify`* to all other active Rivendell modules.

Note

See the Rivendell Notification Protocol API document for a description of the contents of *`notify`*.