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FastPCRF Logs

Tracing

The level of detail in the logs is set by the `trace` parameter in the **`/etc/dpi/fastpcrf.conf`** configuration file.

The `trace` parameter is ignored if the `verbose` parameter is set to `1` — this value enables trace output for **all** subsystems.
To configure logging for one specific or several subsystems, the `verbose` parameter must be set to `0`.

The `trace` parameter is a bitmask, where each bit enables detailed logging for a specific subsystem:

- `0x00000001` — connection monitor — RADIUS connection monitor. Monitors connection activity and decides to switch to a backup RADIUS server if necessary.
- `0x00000002` — task scheduler — internal task scheduler.
- `0x00000010` — auth server — responsible for receiving authorization requests from fastDPI (fastDPI → fastPCRF communication).
- `0x00000200` — radius_client connections — detailed logging of Access-Request queries and Access-Accept/Reject responses.
- `0x00000400` — radius_client monitor — logging of Server-Status requests checking RADIUS server liveliness and responses to them.
- `0x00001000` — CoA server — CoA event logging.
- `0x00002000` — CoA listener - creation of connections with CoA clients.
- `0x00004000` — CoA processor - detailed logging of CoA requests.
- `0x00010000` — fdpi_ctl - logging of events for sending data to fastDPI (fastPCRF → fastDPI communication).
- `0x00020000` — fdpi_crl FIFO - events of the message queue from fastPCRF to fastDPI. CoA requests that need to be sent to all fastDPI servers enter this queue.
- `0x00100000` — logging of start/stop accounting sending.
- `0x00200000` — logging of interim update accounting sending.
- `0x00400000` — logging of receiving raw accounting data from fastDPI.

The `trace` parameter is hot: its value can be changed on the fly using the `service fastpcrf reload` command

FastPCRF logs its actions to the **`/var/log/dpi`** directory.

Log purposes:

fastpcrf_alert.log

Log of fastPCRF startup/shutdown. If any errors occurred during startup/stop, you will see them in this log.

fastpcrf_ap0.log

Log of receiving authorization requests from fastDPI (fastDPI → fastPCRF communication):

- connection errors with fastDPI;
- traces of authorization requests received from fastDPI;
- traces of receiving accounting data from fastDPI.

fastpcrf_ap1.log

CoA log:

- connections with CoA clients;
- receiving and processing CoA requests;
- communication with DHCP and DHCPv6 servers when processing `Framed-Pool` and `Framed-IPv6-Pool` attributes.

fastpcrf_ap2.log

Interaction with RADIUS authorization servers:

- connection and disconnection of RADIUS servers;
- Access-Request authorization queries;
- Access-Accept/Reject responses.

fastpcrf_ap3.log

Accounting log:

- connection and disconnection of RADIUS accounting servers;
- maintenance of the internal accounting database;
- start/stop of subscriber accounting;
- sending accounting data.

fastpcrf_ap4.log

Log of fastPCRF → fastDPI communication:

- connection with fastDPI via the control port;
- sending authorization results to SSG;
- sending CoA requests to SSG.

fastpcrf_stat.log

Internal fastPCRF statistics:

- memory allocation;
- number of requests sent to RADIUS and responses received;
- CoA statistics;
- statistics on connections with RADIUS servers and with fastDPI.

FastPCRF periodically dumps its internal statistics into this log.