Содержание

Service management. Named service profiles

Service profiles are created, modified, and deleted using the `fdpi_ctrl` utility.
Services are divided into three types:

- **Without a profile** — the service settings are described in the DPI configuration or do not require a description, for example, Service 9 (billing NetFlow/RADIUS Accounting export)
- **Anonymous (unnamed) profiles** — the service is not created in advance; its parameters are specified when the service is assigned to a subscriber in JSON format
- **Named profiles** — the service is created before being assigned to a subscriber and is stored in the internal DPI database — Database Administration: UDR and SDR

Named profiles have the following advantages over anonymous profiles:

1. Simplify subscriber administration
2. Allow finding subscribers with a required profile by profile name
3. Allow updating the profile for all subscribers using a given profile simply by changing the profile parameters
4. Allow controlling the limit on the number of unique profiles (maximum 65535)

Anonymous (unnamed) profiles, in turn, have the following advantages:

1. No profile management is required (there is no need to create or delete profiles); the profile is automatically removed when the subscriber or the subscriber's profile is deleted
2. No profile name needs to be invented

Command syntax

General command format:

```
fdpi_ctrl command --service service_identifier [IP_list] [LOGIN_list]
```

Command parameter description:

Parameter	Description, possible values, and format	Note
`command`	Values: 1. `load` — load data 2. `del` — delete. For `–service`, `service_identifier` must be specified 3. `list` — display information for the specified `IP_list` or all information if the `all` argument is specified.	In the `list` and `del` commands, `all` can be specified instead of an IP/LOGIN list, meaning the command is applied to all entries.
`service_identifier`	Numeric ID corresponding to a service from the list	

Parameter	Description, possible values, and format	Note
IP_list	Values: 1. –file — file containing a list of IP addresses 2. –ip — single IP address, format: 192.168.0.1 3. –ip_range — IP address range (inclusive), format: 192.168.0.1-192.168.0.5 4. –cidr — CIDR notation, format: 192.168.0.0/30, 5.200.43.0/24~ (CIDR notation with excluded boundary addresses)	The first and last addresses can be excluded from a CIDR range (according to classless addressing conventions, these are the gateway and broadcast addresses) by adding the ~ character to the end of the CIDR definition, for example: –cidr 5.200.43.0/24~
LOGIN_list	Values: 1. –file — file containing a list of logins 2. –login — single login, format: USER1, "FIRST_NAME LAST_NAME" (login specified with escaped special characters)	"USER1" — login specified in double quotes 'USER2' — login specified in single quotes

A line beginning with the # character is treated as a comment.

Service list

When blocking services (4, 16, 49) are activated, only TCP traffic is blocked. To block UDP traffic as well, enable the udp_block parameter.

ID	Brief description	Link to detailed description
1	bonus program	Description
2	advertising	Description
3	ad blocking	Description
4	blacklist filtering	Description
5	whitelist and Captive Portal	Description
6	notification via HTTP redirect	Description
7	caching	Description
8	DDoS protection passed	Description
9	RADIUS accounting / NetFlow statistics collection for billing	Description
10	DDoS protection	Description
11	CGNAT and NAT 1:1	Description
12	PCAP traffic recording	Description
13	mini Firewall	Description
14	traffic diversion to a TAP interface	Description
15	special subscriber (all traffic is assigned to cs0; filtering (Service 4) is not applied for the vChannel and the common channel)	Description

ID	Brief description	Link to detailed description
16	whitelist and redirection to the Captive Portal without Internet access	Description
17	traffic mirroring to the specified VLAN	Description
18	session policing for specific protocols and traffic class identification at the channel and subscriber levels	Description
19	DNS response substitution; planned: redirecting DNS queries to the provider's DNS server	Description
49	IPv6 traffic blocking	Description
50	marketing campaign participant with notification via HTTP redirect	Description
51	reserved (internal service)	
254	VRF	Description

Creating, enabling, and disabling services

Profile names are unique within each service. For example, `profile_name_1` for Service 4 (blacklist) is different from `profile_name_1` for Service 5 (whitelist).

Creating a named profile for Service 6 (one-time redirect), operator news notification, and assigning this service with the profile to a subscriber:

```
fdpi_ctrl load profile --service 6 --profile.name redir_to_news --
profile.json '{ "redirect" : "http://mysite.com/ips_news", "check" : true }'
fdpi_ctrl load --service 6 --profile.name redir_to_news --ip 192.168.0.1
fdpi_ctrl load --service 6 --profile.name redir_to_news --login test
```

Information on command result

Assigning Service 6 without a profile (the service parameters are taken from the DPI configuration file):

```
fdpi_ctrl load --service 6 --ip 192.168.0.1
fdpi_ctrl load --service 6 --login test
```

Assigning Service 6 with an anonymous profile (an unnamed profile that exists until the service is disabled for the subscriber):

```
fdpi_ctrl load --service 6 --profile.json '{ "redirect" :
"http://mysite.com/ips_news", "check" : true }' --ip 192.168.0.1
fdpi_ctrl load --service 6 --profile.json '{ "redirect" :
"http://mysite.com/ips_news", "check" : true }' --login test
```

Disabling Service 6 for a specific subscriber:

```
fdpi_ctrl del --service 6 --ip 192.168.0.1
fdpi_ctrl del --service 6 --login test
```

Service management commands

Get a list of all subscribers with Service 6 enabled:

```
fdpi_ctrl list all --service 6
```

Find subscribers with Service 6 assigned using a specific named profile:

```
fdpi_ctrl list all --service 6 --profile.name redir_to_news
```

Get information for a specific IP address for Service 6:

```
fdpi_ctrl list --service 6 --ip 192.168.0.1
```

Delete a named profile (the profile must not be assigned to any subscribers before deletion):

```
fdpi_ctrl del profile --service 6 --profile.name redir_to_news
```

Modify the settings of a service with a named profile (the new settings will be applied to all subscribers using the specified service profile):

```
fdpi_ctrl load profile --service 6 --profile.name redir_to_news --
profile.json '{ "redirect" : "http://mysite.com/ips_news_new", "check" :
true }'
```

Display all created profiles for all services:

```
fdpi_ctrl list all profile --service
```

When specifying an IP list, multiple options can be used simultaneously: `–file`, `–ip`, `–ip_range`, `–cidr`:

```
fdpi_ctrl list --service 6 --ip 192.168.0.1 --ip 192.168.0.2 --file
fip_1.txt --ip_range 192.168.0.3-192.168.0.6 --login USER1
```

The operation will be applied to all specified entries for which no error occurred.

ℹ If an error occurs, previously applied changes are **not** rolled back!

TCP and UDP Protocol Blocking Configuration