Data Transfers

Data transfers are divided into public and private. Transfers within our network are considered private and do not count towards the limit. Transfers within one node are not charged at all.

Monthly Overviews

In the “Networking → List monthly traffic” menu, we can check the monthly overviews of transferred data.

<table>
<thead>
<tr>
<th>Monthly traffic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Filters</td>
</tr>
<tr>
<td>Limit: &lt;input&gt;</td>
</tr>
<tr>
<td>Year: &lt;input&gt;</td>
</tr>
<tr>
<td>Month: &lt;input&gt;</td>
</tr>
<tr>
<td>Category: &lt;input&gt;</td>
</tr>
<tr>
<td>Protocol: &lt;input&gt;</td>
</tr>
<tr>
<td>IP version: &lt;input&gt;</td>
</tr>
<tr>
<td>Environment: &lt;input&gt;</td>
</tr>
<tr>
<td>Location: &lt;input&gt;</td>
</tr>
<tr>
<td>Network: &lt;input&gt;</td>
</tr>
<tr>
<td>Node: &lt;input&gt;</td>
</tr>
<tr>
<td>VPS: &lt;input&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td>IP address</td>
</tr>
<tr>
<td>------------</td>
</tr>
<tr>
<td>185.8.154.33</td>
</tr>
<tr>
<td>185.8.154.4</td>
</tr>
<tr>
<td>185.8.154.2</td>
</tr>
<tr>
<td>185.16.154.2</td>
</tr>
</tbody>
</table>

Under default settings, transfers for all IP addresses for the current month are displayed. Every address can appear in the overview several times since counting public and private transfers is recorded separately.

Using a filter form, it is possible to only display transfers from the past, choose between TCP, UDP or other protocols or choose a specific VPS, node, location, etc.

Real-time Transfer Monitor

vpsAdmin measures transferred data every 10 seconds and uses that data to calculate the average for one second. You can display it either in the “Networking → Live monitor” menu or using vpsfreectl.

Web Monitor
CLI Monitor

`vpsfreectl` contains the `ip_traffic top` command, which runs a TUI application similar to `iftop`.

```
$ vpsfreectl ip_traffic top --help
...
-L, --list-parameters List output parameters
-o, --output PARAMETERS Parameters to display, separated by a comma
...
Command options:
--unit UNIT Select data unit (bytes or bits)
--limit LIMIT Number of IP addresses to monitor
--ip-address ADDR ADDR or ID of IP addresses to monitor
--ip-version VER Filter IP addresses by version
--environment ID Filter IP addresses by environment
--location ID Filter IP addresses by location
--network ID Filter IP addresses by network
--ip-range ID Filter IP addresses by ip_range
--node ID Filter IP addresses by node
--vps ID Filter IP addresses by vps
```
The program can be controlled using the arrow keys. The left and right arrow keys change the column according to which the addresses are ordered. The up and down arrow keys then reverse the order, i.e. whether it’s ascending or descending. The program is terminated using the q key.

Options other than -o and -L have to be separated from vpsfreectl arguments using two dashes --. You can use the --unit option to choose whether the program will display transfers in bytes per second or bits per second (default setting).

Using the -o, -output option, you can choose what values we want to check. First, display all of the possibilities:

```
$ vpsfreectl ip_traffic top -L
packets
packets_in
packets_out
bytes
bytes_in
bytes_out
public_packets
public_packets_in
public_packets_out
public_bytes
public_bytes_in
public_bytes_out
public_tcp_packets
public_tcp_packets_in
public_tcp_packets_out
public_tcp_bytes
public_tcp_bytes_in
public_tcp_bytes_out
public_udp_packets
```
Now you can display the number of packets:

```bash
$ vpsfreectl ip_traffic top -o packets_in,packets_out,packets
```

The remaining options are used to filter the monitored IP addresses.