

# Table of Contents



## Changes in version 2.2 Polar Bear

1. SSL certificates support in "white" and "black" lists. This replaces IP for HTTPS protocol

WEB site's address becomes variable by wide usage of content delivery networks (CDN) and systems of geographical reservation and balancing based on DNS site's address. IP address may depend on time, coordinates of a subscriber, DNS server in use and other factors. In case of CDN the list of IP addresses may include hundreds or thousands of addresses, and other sites can be accessible through them.

This causes problems for Captive Portal. It requires an access by HTTPS to banks' sites or social networks - in case IP address is used to identify a site.

We offer the following solution.

The HTTPS site access is granted not by its IP but by its SSL certificate name. This certificate is made by trusted companies. The name on it can be checked by browser in page "properties". You use this name in "white" or "black" lists - and DPI checks the certificate and grants or rejects an access based on it.

1. Support of subscribers having several IPs

The operator provides a channel of the fixed width and a set of IPs to a subscriber (typically a company). The latest can use these resources as he likes.

You can reserve any number of IP addresses for any subscriber. And these IPs may be arbitrary, not a block..

2. Two new kinds of netflow

1. netflow for billing: it is used for billing. Is generated for subscribers with plans that require this information. Is aggregated by subscribers and traffic classes. Traffic classes allow to count protocols or their groups separately in billing. Aggregation and selectivity by subscribers dramatically reduce an amount of data transferred and processed for billing purposes.

2. complete and detailed netflow for studies COPM tasks

Netflow export from DPI allows to reduce the load to other, typically more expensive, equipment.

3. Protocol signatures are updated. The quality and percentage of traffic detection is improved.

## Upgrade manual



Do not update Linux kernel to the latest version kernel-2.6.32-431.29.2. This kernel is not binary compatible with Kernel ABI. The network driver can not be loaded after this update. In case you made this update - please configure grub loader to load the previous version while solving the problem<sup>1)</sup>.

Check what's new in [previous version](#).

<sup>1)</sup>

Set the parameter default=1 in the file /etc/grub.conf