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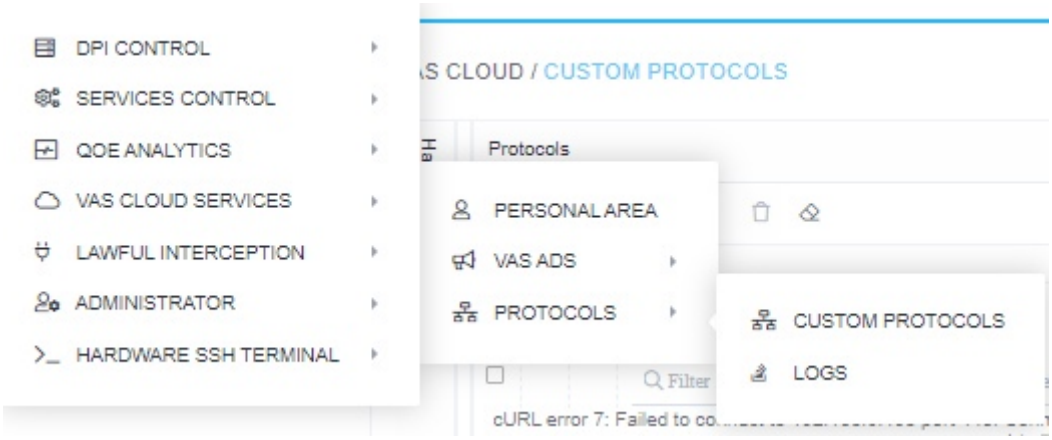
Custom protocols

To go to the "Custom protocols" section, in the shutting down menu, do the path "*VAS CLOUD SERVICES*" → "*PROTOCOLS*" → "*CUSTOM PROTOCOLS*" .



The section "Custom Protocols" includes three blocks: "Hardware" collapsed to the left, "Protocols" and "Resources".

Hardware

This block contains a summary table of user equipment, which can be filtered by name, mode, list type, status and description.

Equipment in this list cannot be added or removed. The pivot table can be updated and edited the list type, synchronization mode (By DPIUI2 - dpiui2 module downloads lists to equipment. By URL - FastDPI downloads lists by reference. By URL by default) and state (enable or disable) of each equipment in the list.

At the bottom of the block there is a button for exporting the list to a user-selected format (Excel, CSV, PDF, PNG).

Protocols

Utility to check for custom protocol entry - `checkproto`.

The "Protocols" block consists of a panel of elements, which includes:

* **Adding a list item**

To add an item to the list, you must fill in the fields:

name - is a required field, containing only Latin letters, numbers or their combination. At the

beginning of each name, by default, the prefix "cp_" (CP stands for Custom Protocol) is assigned, which is mandatory;

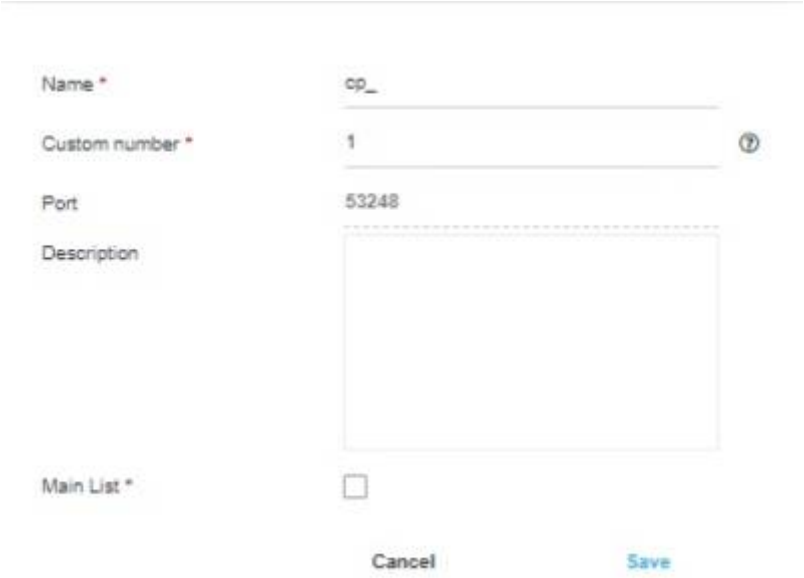
user number - is a required field, as well as unique and limited to the range from 1 to 1024;

port - filled in automatically;

description - is not a required field;

main list - if this parameter is ignored, the default list type is test;

At the very bottom of the window. there are the "*save*" button, which saves the user-created protocol and adds it to the list, and the "cancel" *button* that minimizes the window without saving the new protocol.



* **Startup and shutdown**

Or activation and deactivation of the protocol, allows the user to enable the selected protocol for further work or disable it. Any action with a disabled protocol will automatically activate it. These changes are also displayed in the main section of the "Custom interface" in the form of an enable button, which is located next to the "Name" column of each protocol in the list.

More specific custom SNI signatures are prioritized.
Example: for host `a.b.c.d`, if the signatures `*.d`, `*.c.d` and `*.b.c.d` are present, the protocol defined by the signature `*.b.c.d` works only for signatures with *.
Detailed example in section Example of prioritization of a custom protocol over a cloud protocol

* **Import from file**

For the convenience of filling out the fields for creating a protocol, a template is provided that can be downloaded in excel format, filled in and downloaded back. It is impossible to change the data after downloading the file, you can only delete the protocol.

* **Delete** - the ability to delete selected protocols, the selection of which is carried out by checking the box in the window located in the main section of the user interface. This action can also be performed by pressing the button in the form of an image of a "trash can", which is located next to the "Description" column of each protocol in the list;

* **Clearing the list** - deleting all protocols in the list;

* **Update list** - updates the list;

Below is a list of all user-created protocols, which can be filtered by name, user number, port, list type and description. You can change the protocol using the button located next to the "Name" column of each protocol in the list.

At the bottom of the block there is a button for exporting the list to a user-selected format (Excel, CSV, PDF, PNG)

Example of prioritization of a custom protocol over a cloud protocol

1. Let's upload two protocols:

Cloud Protocol: `cloudflare`

- `cloudflare.com`
- `*.cloudflare.com`

Custom protocol: `cp_test1234`

- `cloudflare.com`
- *`www.cloudflare.com` (you can enter `www.cloudflare.com`, it will automatically change to

*www.cloudflare.com and notify you of the change and intersection with a particular protocol.)

2. Result of uploaded lists in DPI:

`cloudflare` contains:

- `*.cloudflare.com`

`cp_test1234` contains:

- `cloudflare.com`
- *www.cloudflare.com

3. The `cp_test1234 drop` rule would mean:

- Subdomains are not affected, example: `my.cloudflare.com` is available, excluding www.cloudflare.com.
- `cloudflare.com` and www.cloudflare.com are blocked.

4. The `cp_test1234 session policing` rule would mean:

- Subdomains are not affected, example: `my.cloudflare.com` is available, excluding www.cloudflare.com.
- Impact on `cloudflare.com` and www.cloudflare.com resources

In the cloud `cloudflare.com` is excluded from the cloud protocol and placed in the custom protocol, and **In DPI** the entry *www.cloudflare.com signifies the priority of the custom protocol over the entry `*.cloudflare.com`

Resources

The list of resources depends on the protocol selected by the user from the previous block.

The "resources" block consists of a panel of elements, which includes:

* **Adding an element**

To add an item to the list, you must fill in the fields:

type - is a required field, filled in by choosing from the proposed list (ip or sni);

uri (Uniform Resource Identifier - a uniform resource identifier) - is a mandatory field for filling, the filling method of which depends on the "type" of the resource selected by the user (ip or sni);

P.S. Example of filling in ip type (201.1.1.1), Example of filling in sni of type (yandex.ru).

* **Startup and shutdown**

Or activation and deactivation of a resource, allows the user to enable the selected resource for further work or disable it. Performing any actions with a disabled resource leads to its activation automatically. These changes are also displayed in the main section of the user interface as an enable button located in front of the Name column of each resource in the list;

* **Import from file**

For the convenience of filling out the fields for creating a resource, a template is provided that can be downloaded in excel format, filled in and downloaded back. It is impossible to change the data after downloading the file, you can only delete the resource.

* **Delete** - the ability to delete the selected resources, the selection of which is carried out by checking the box in the window located in the main section of the user interface next to the "Uri" column of each resource;

* **Clearing the list** - deleting all protocols in the list;

* **Update list** - update the list;

Below is a list of all user-created resources, which can be filtered by protocol name, type and uri. You

can change the protocol using the button located next to the "Name" column of each resource in the list.

At the bottom of the block there is a button for exporting the list to a user-selected format (Excel, CSV, PDF, PNG).