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# **Custom Protocols**

Protocols/signatures available to the user are divided into the following types:

- Built-in protocols updated along with the SSG software version. Installing a new version requires a DPI reboot, which causes traffic interruption. If needed, they can be supplemented with up-to-date attributes from the VAS Cloud. This is only necessary for complex protocols, but the option is available for all.
- 2. **Cloud protocols** created by VAS Experts are periodically updated from the VAS Cloud. This ensures that popular applications remain up-to-date as their behavior changes.
- Custom (user-defined) protocols protocols created by users via the GUI using VAS Cloud tools. These have higher priority than those loaded from the VAS Cloud, and within them, IP:PORT takes precedence over IP and CIDR. It is possible to add a protocol based on IP, SNI, or AS.

Users can add protocols based on IP, SNI, and AS. Custom protocols override Built-in and Cloud protocols.

Adding a new protocol is done in the **VAS Cloud Services**  $\rightarrow$  **Custom Protocols** section in 3 steps:

# Step 1. Adding a New Protocol

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#### Protocols

			Name	Custom	Port	List type	Description	Updated	
	7	8	QFILTER	QFILTER	QFILTER	~	QFILTER		
	۲		cp_test2	5	53252	Test	test today	07/05/2024 11:	Û
	۲		cp_asntst	8	53255	Test		07/23/2024 16:	Û
	۲		cp_btk	1	53248	Test		08/21/2024 12:	Û
	۲		cp_sni	2	53249	Test		09/27/2024 15:	Û
	۲		cp_new_test	3	53250	Test		10/01/2024 11:0	Û
	۲		cp_for_http	4	53251	Test		10/01/2024 14:	Û
	۲		cp_fla	6	53253	Test		12/12/2024 15:0	Û
	۲		cp_222	9	53256	Test		03/21/2025 17:	Û
	۲		cp_test3	7	53254	Test		04/21/2025 11:8	Û
1-9	of 9			~~ ~	1 >	>>	9 🗗	Export 100	$\downarrow$

#### On the **Protocols** panel, you can:

#### 1. Add list item.

- Fill in the following parameters:
- Name a mandatory field. It must contain only letters, numbers, or their combinations. Each name is automatically prefixed with "cp\_" (CP stands for Custom Protocol), which is mandatory;
- Custom Number a mandatory unique field, limited to the range of 1 to 1024;
- **Port** filled in automatically;
- **Description** an optional field;
- Main List if this parameter is ignored, the default list type is "test." The flags "main" and "test" are used for debugging the protocol ("test") and subsequently launching it for policing subscribers ("main"). Usually, the test protocol is first uploaded to the DPI test stand, and after debugging is complete, the "main" flag is set, and it is uploaded to all other DPIs.

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#### 2. Enable or disable the protocol.

Performing any actions with a disabled protocol (step 7) automatically activates it. These changes are also reflected in the main section of the "User Interface" as an activation button next to the "Name" column of each protocol in the list.

#### 3. Import data from a file.

To facilitate the completion of the protocol creation fields, a template is provided that can be exported in Excel format, filled out, and uploaded in this window. After uploading the file, the data cannot be changed; only the protocol can be deleted.

Click to download or drag a file     Name   Custom number   Port   List type   Description     Q.FILTER   Q.FILTER   Q.FILTER   Q.FILTER						
Name	Custom number	Port	List type	Description		
Name Custom number Port List type Description   Q.FILTER Q.FILTER Q.FILTER Q.FILTER				QFILTER		

- 4. Delete an item from the list.
- 5. Clear the list.
- 6. Refresh the list.
- 7. Enable and disable list items.
- 8. Modify a list item.
- 9. Export the list. Available formats: Excel, CSV, PDF, PNG.

# Step 2. Add Resources Defining the Protocol

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	Reso	ource	List	Type			Uri	1	w	F	
	7	8	QFILTER	1700		~	QFILTER	Ĺ		-	
	•		cp_asntst	asn			32934 (FACEBOOK, U	Įę			Û
	۲		cp_asntst	asn			I3335 (CLOUDFLARE	N			Û
1-	2 of 2			≪ <	1	>>	9 🕒	xport	1	100	\$ <sup>994</sup>
1-	2 of 2			~~ ~	1 >	>>	9 0	xport	1	00	1

On the **Resource List** panel, you can:

## 1. Add list item.

Fill in the following parameters:

• **Type** — a mandatory field, filled by selecting from the offered list (Auto, IP, SNI, ASN (only external AS can be specified, e.g., Facebook or Google));

# URI (Uniform Resource Identifier) — a mandatory field, how to fill it depends on the type of resource (IP or SNI); Example: Type IP — 201.1.1.1. Type SNI — google.com.



## 2. Enable or disable the resource.

Performing any actions with a disabled protocol (step 7) automatically activates it. These changes are also reflected in the main section of the "User Interface" as an activation button next to the "Name" column of each protocol in the list.

# 3. Import data from a file. and Check resource.

To facilitate the completion of the protocol creation fields, a template is provided that can be exported in Excel format, filled out, and uploaded in this window. After uploading the file, the data cannot be changed; only the protocol can be deleted.

	Click to upload or	drag a file here	
File	File size	State	
	Data not	t found	
0-0 of 0			10 🗸

- 4. Delete list items.
- 5. Clear the list.
- 6. Refresh the list.
- 7. Enable and disable list items.
- 8. Modify a list item.
- 9. Export the list. Available formats: Excel, CSV, PDF, PNG.

# Step 3. After Preparing the Protocol, It Needs to Be Uploaded to the DPI Devices from the List.



_						1
=	Hard	lwares				
		Name	Synchronizatic mode	List type	Status	Status Description
	3	QFILTER	~	~	QFILTER	QFILTER
D		Test_DPI-00_VASE_demo_	By DPIUI2	Test	ok	
Ð		Test_DPI-01_VASE_demo_	By DPIUI2	Test	ok	
۲		martynovVirtDPI, v.14.0-BE	By URL	Test	ok	
Ð		testPCRF	By DPIUI2	Test	ok	

On the **Hardwares** panel, you can:

- 1. Refresh the list.
- 2. Enable and disable list items.
- 3. Edit a list item.
- 4. Export the list. Available formats: Excel, CSV, PDF, PNG.

# Logs

In **VAS Cloud Services**  $\rightarrow$  **Logs** section, you can view all actions performed with protocols. You can delete specific entries, clear the list, refresh, and export it in formats Excel, CSV, PDF, PNG.

VAS Experts	=	VAS cloud services $\rightarrow$ Log	s							🕀 🖅 🖓 a	Ex
earch	×	Û @									2
SSG control	~	( Logs									
		Event	Attempts	Status	Status Description	Data	Create Time	Update Time	Create User	Update User	
PCRF control	~	QFILTER	QFILTER	v	QFILTER	QF			QFILTER	QFILTER	
QoE analytics	~	GenerateDeployListsActio	n 1	Success			05/21/2025 06:29	05/21/2025 06:29	system	system	Û
> VAS cloud services	~	UnzipFileAction	1	Success			05/21/2025 06:29	05/21/2025 06:29	system	system	Û
Derroand grag		DownloadFileAction	1	Success		٢	05/21/2025 06:29	05/21/2025 06:29	system	system	Û
Personal area		SaveMyCustomPrtclsDicsA	c 1	Success			05/21/2025 06:04	05/21/2025 06:04	system	system	Û
Custom protocols		ForceSyncQoEDicsAction	1	Success			05/21/2025 06:04	05/21/2025 06:04	system	system	Û
Protocols groups		UnzipMyCustomPrtclsDics	Ac 1	Success			05/21/2025 06:04	05/21/2025 06:04	system	system	Û
Logs		GenerateSyncQoEDicsTasi	s. 1	Success			05/21/2025 06:04	05/21/2025 06:04	system	system	Û
Administrator	~	DownloadMyCustomProto	:0 1	Success			05/21/2025 06:04	05/21/2025 06:04	system	system	Û
		ForceSyncQoEDicsAction	1	Success			05/21/2025 05:38	05/21/2025 05:38	system	system	Û
Hardware SSH terminal	~	GenerateSyncQoEDicsTasi	s. 1	Success			05/21/2025 05:38	05/21/2025 05:38	system	system	Û
		ForceSyncQoEDicsAction	1	Success			05/21/2025 04:01	05/21/2025 04:01	system	system	Û
		GenerateSyncQoEDicsTasi	s. 1	Success			05/21/2025 04:01	05/21/2025 04:01	system	system	Û
~		ForceSyncQoEDicsAction	1	Success			05/20/2025 16:01	05/20/2025 16:01	system	system	Û
L2		GenerateSyncQoEDicsTasi	s. 1	Success			05/20/2025 16:01	05/20/2025 16:01	system	system	Û
		GenerateSyncQoEDicsTasi	s. 1	Success			05/20/2025 16:01	05/20/2025 16:01	system	system	Û
		GenerateDeployListsActio	n 1	Success			05/20/2025 06:28	05/20/2025 06:28	system	system	Û
		1-100 of 237		~~ ~	1 2 3 >	>>				Export 100	1