

How to configure DNS based FortiGuard web filtering with FortiOS v5.4

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Products

FortiGate v5.4

Description

This article provides a sample configuration for DNS based FortiGuard web filtering.

In FortiOS v5.2 the DNS web filtering is one option of 'Web Filter' profile. In FortiOS v5.4 this feature has moved to separate 'DNS Filter' security profile.

The use of this feature is straightforward:

- Create and configure 'DNS Filter' profile
- Create and configure firewall policy
- Assign the profile to the firewall policy

FortiOS intercepts DNS requests from clients to DNS servers and asks FortiGuard servers for rating.

It is recommended to filter client's DNS requests only and not the DNS requests from client internal DNS servers.

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Network topology

Internet w/ DNS servers === (wan1)[FG100D](lan) === PCs in LAN

Configure DNS filter

The screenshot shows the FortiGate 100D FG100D-9 configuration interface. The left sidebar contains a navigation menu with 'Security Profiles' expanded to 'DNS Filter'. The main content area is titled 'Edit DNS Filter Profile' and includes the following fields and options:

- Name:** filter_users
- Comments:** Write a comment... (0/255)
- Block DNS requests to known botnet C&C:**
- FortiGuard category based filter:** (Selected)
- Static Domain Filter:**
- Options:**
 - Allow DNS requests when a rating error occurs:
 - Log all Domains:
 - Redirect blocked DNS requests:
 - Redirect Portal IP: (Use FortiGuard Default) Specify: 208.91.112.55

A list of FortiGuard categories is displayed with checkboxes: Potentially Liable, Adult/Mature Content, Bandwidth Consuming, Security Risk, General Interest - Personal, General Interest - Business, and Unrated.

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CLI

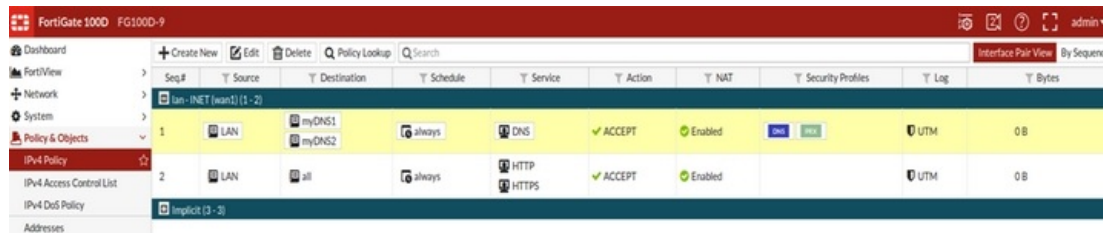
```
config dnsfilter profile
edit "filter_users"
config ftgd-dns
config filters
edit 1
set category 83
set action block
next
edit 2
set category 5
set action block
next
edit 3
set category 1
set action block
next
edit 4
set category 6
set action block
next

... truncated ...

edit 29
next
end
next
end
```

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[Configure firewall policies](#)



The screenshot shows the FortiGate 100D FG100D-9 web interface. The left sidebar contains navigation options: Dashboard, FortiView, Network, System, Policy & Objects, IPv4 Policy, IPv4 Access Control List, IPv4 DoS Policy, and Addresses. The main area displays a table of firewall policies. The table has columns for Seq.#, Source, Destination, Schedule, Service, Action, NAT, Security Profiles, Log, and Bytes. Two policies are visible:

Seq.#	Source	Destination	Schedule	Service	Action	NAT	Security Profiles	Log	Bytes
1	LAN	myDNS1 myDNS2	always	DNS	ACCEPT	Enabled	UTM	0 B	
2	LAN	all	always	HTTP HTTPS	ACCEPT	Enabled	UTM	0 B	

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```
config firewall policy
edit 1
  set srcintf "lan"
  set dstintf "wan1"
  set srcaddr "LAN"
  set dstaddr "myDNS1" "myDNS2"
  set action accept
  set schedule "always"
  set service "DNS"
  set utm-status enable
  set dnsfilter-profile "filter_users"
  set profile-protocol-options "default"
  set nat enable
next
edit 2
  set srcintf "lan"
  set dstintf "wan1"
  set srcaddr "LAN"
  set dstaddr "all"
  set action accept
  set schedule "always"
  set service "HTTP" "HTTPS"
  set nat enable
next
end
```

To troubleshoot use the following command:

```
diag debug enable
diag debug application dnsproxy -1
```

When finished, disable debug with:

```
diag debug reset
diag debug disable
```

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