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.

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

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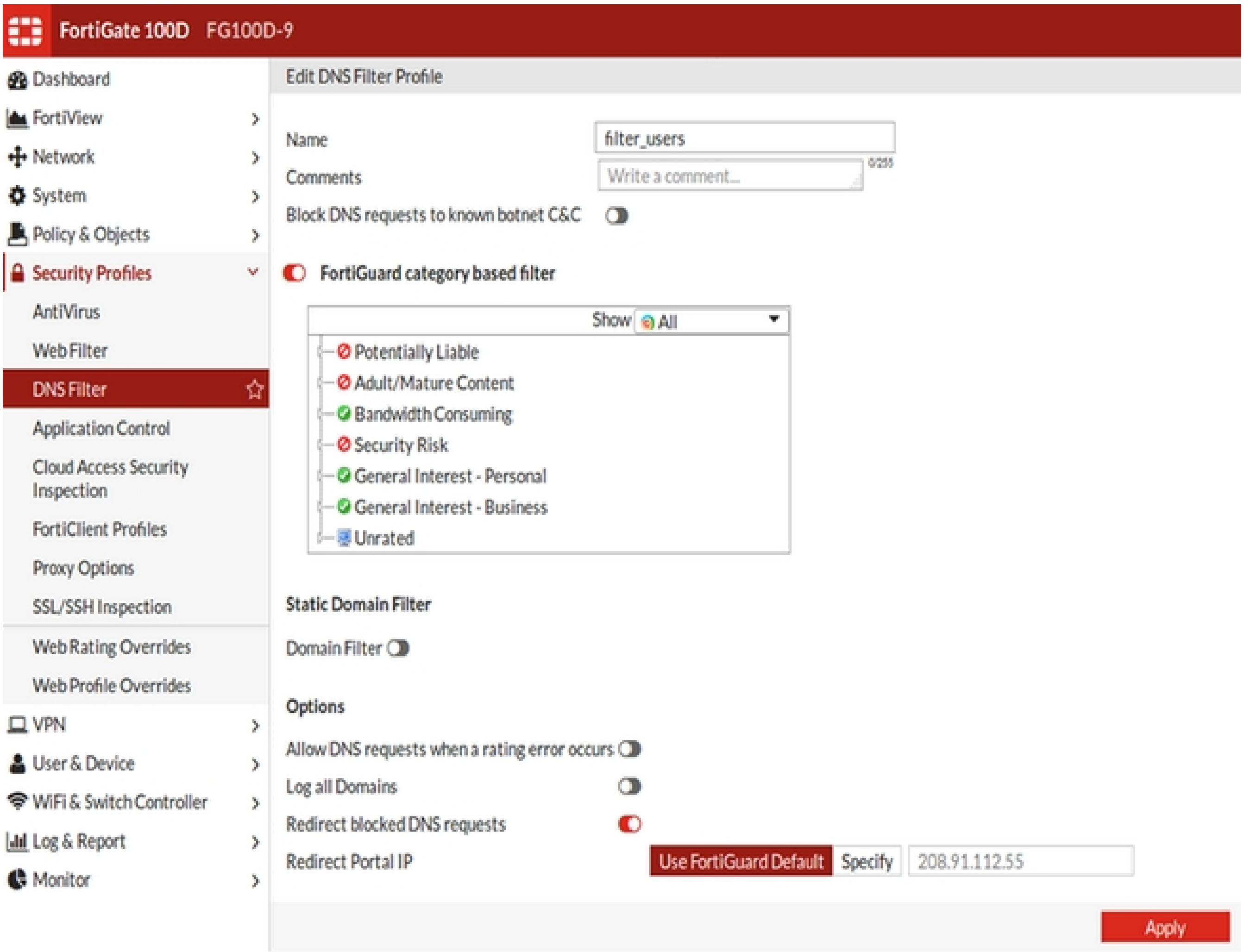
Network topology

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

Configure DNS filter



Edit DNS Filter Profile

Name: filter_users

Comments: Write a comment... 0/255

Block DNS requests to known botnet C&C ○

● FortiGuard category based filter

Show: All

- ⊘ Potentially Liable
- ⊘ Adult/Mature Content
- ✓ Bandwidth Consuming
- ⊘ Security Risk
- ✓ General Interest - Personal
- ✓ General Interest - Business
- Unrated

Static Domain Filter

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

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CLI

```
config dnsfilter profile
  edit "filter_users"
    config ftgd-dns
```

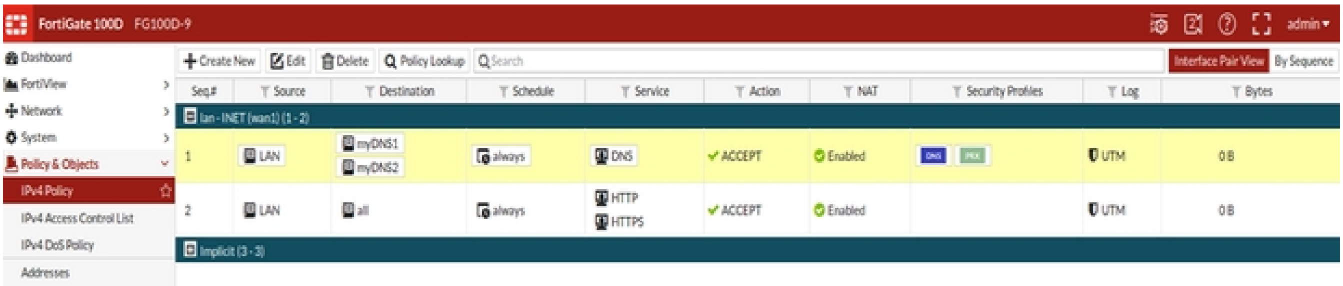
```
            config filters
                edit 1
                    set category 83
                    set action block
                next
                edit 2
                    set category 5
                    set action block
                next
                edit 3
                    set category 1
                    set action block
                next
                edit 4
                    set category 6
                    set action block
                next

                 … truncated …

                      edit 29
                next
            end
        end
    next
end
```

//

Configure firewall policies



Seq.#	Source	Destination	Schedule	Service	Action	NAT	Security Profiles	Log	Bytes
lan - INET (wan1) (1 - 2)									
1	LAN	myDNS1 myDNS2	always	DNS	✓ ACCEPT	✓ Enabled	DNS	UTM	0 B
2	LAN	all	always	HTTP HTTPS	✓ ACCEPT	✓ Enabled		UTM	0 B
Implicit (3 - 3)									

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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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