



FortiGate Configuration for TeleVoIPs

Follow the directions below to ensure proper configuration and QoS settings for the FortiGate firewalls. Please understand, instructions may vary based on the model and firmware version of your device.

I. Required Changes

1. Log in to the FortiGate.
2. Open the **command line interface (CLI)** from the dashboard.



3. Input the following, pressing enter after each line:

```
config system settings
set default-voip-alg-mode kernel-helper-based
end
```

```
config system settings
set sip-helper disable
set sip-nat-trace disable
end
```

4. Reboot the FortiGate device
5. Reopen the CLI and enter the following commands (do not enter the text in parentheses):

```
config system session-helper
show (you need to find the entry for SIP, usually 13, but it can vary)
delete 13 (or the number that you identified in the previous command)
end
```

6. Disable RTP processing as follows:

```
config voip profile
edit default
config sip
set status disable
```

```
set rtp disable
set strict-register disable
endconfig
```

7. Exit the CLI.

II. QoS Optimization (Recommended)

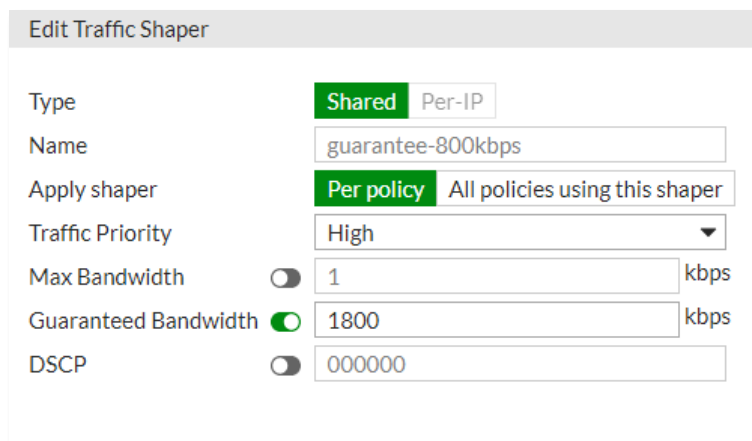
1. Enable Traffic Shaping and VoIP Features under System > Feature Visibility
2. Create an address object for your TeleVoIPs Phone Server (**Contact our support team at support@televoips.com if you have not already received the phone server IP address**):
 - Go to **Policy & Objects > Addresses** and create a New **Address**
 - Set the **Name** to **TeleVoIPs SIP**
 - Set the **Type** to **Subnet**
 - Set the **Subnet / IP Range** to your **TeleVoIPs** phone server **IP address**

The screenshot shows the 'Edit Address' configuration window with the following settings:

Field	Value
Name	TeleVoIPs SIP
Color	Change
Type	Subnet
Subnet / IP Range	23.146.128.5
Interface	any
Show in Address List	<input checked="" type="checkbox"/>
Static Route Configuration	<input type="checkbox"/>
Comments	

3. Create a VoIP Traffic Shaper:

- Go to **Policy & Objects > Traffic Shapers** and edit the default high-priority traffic shaper.
- Set **Type** to **Shared**.
- Change **Name** if desired.
- Set **Apply shaper** to **Per Policy**.
- Set **Traffic Priority** to **High**.
- Enable **Guaranteed Bandwidth** and enter **1800 Kbps** or higher if desired.



The screenshot shows the 'Edit Traffic Shaper' configuration window with the following settings:

Type	<input checked="" type="radio"/> Shared <input type="radio"/> Per-IP
Name	<input type="text" value="guarantee-800kbps"/>
Apply shaper	<input checked="" type="radio"/> Per policy <input type="radio"/> All policies using this shaper
Traffic Priority	<input type="text" value="High"/>
Max Bandwidth	<input type="checkbox"/> <input type="text" value="1"/> kbps
Guaranteed Bandwidth	<input checked="" type="checkbox"/> <input type="text" value="1800"/> kbps
DSCP	<input type="checkbox"/> <input type="text" value="000000"/>

4. Create two traffic shaping policies:
- Go to **Policy & Objects > Traffic Shaping Policy** and create a high-priority traffic shaping policy for **ALL** outbound traffic to the **TeleVoIPs** phone server
 - Set **Source to All**
 - Set **Destination to TeleVoIPs SIP**
 - Set **Service to ALL**
 - Set **Outgoing Interface to Any**
 - Enable **Shared Shaper** and **Reverse Shaper** and set both to **the new shaper you created**

Edit Shaping Policy

Status Enabled Disabled

Comments 0/255

If Traffic Matches:

Source

+

Destination

+

Schedule

Service

+

Application Category

+

Application

+

URL Category

+

Then:

Outgoing Interface

+

Shared Shaper

Reverse Shaper

Per-IP Shaper

5. Repeat this process while swapping the **Source** and **Destination** to create a policy for **ALL** inbound traffic to the TeleVoIPs phone server.

Edit Shaping Policy

Status Enabled Disabled

Comments 0/255

If Traffic Matches:

Source + x

Destination + x

Schedule Schedule

Service + x

Application Category +

Application +

URL Category +

Then:

Outgoing Interface any + x

Shared Shaper ▼

Reverse Shaper ▼

Per-IP Shaper

6. Arrange the policies so that the new Shaper policies are at the top