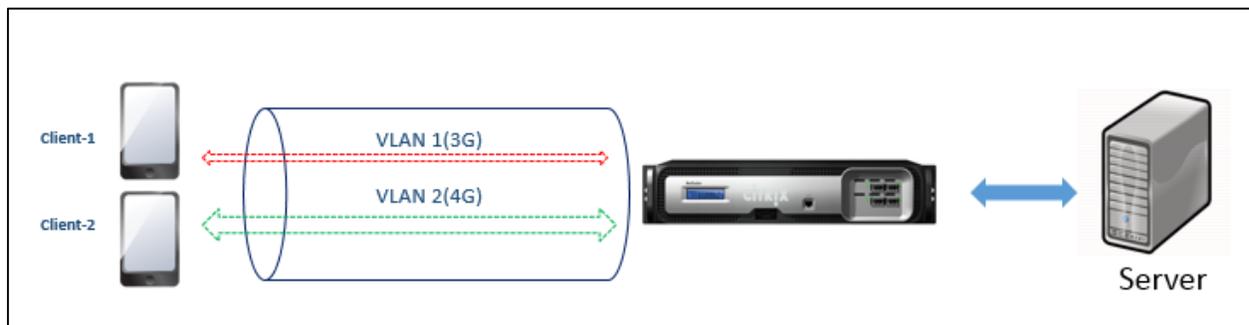


How to use policy based TCP profile in NetScaler?

NetScaler provides the luxury of building our own custom profile based on different requirements. Tuning the TCP profile by changing the parameters leads to optimized performance. However there is a need to change TCP parameters based on environmental factors so that the system can adapt to provide best performance based on traffic going through it. Some of the key environmental factors that influence TCP Profile selection are 3G, 4G , LAN, WAN type of traffic. In order to accommodate such flexibility , NetScaler provides a mechanism to choose TCP Profile based on policy. This guide speaks about how to configure policy based TCP Profiles and some example configurations to help you do it in your NetScaler device.

How to configure policy based TCP profile in NetScaler?

Consider the following requirement in a customer deployment. Customer has 3G/4G subscribers, all the 3G subscribers are coming through VLAN-1 and 4G from VLAN-2. Based on this parameter, we can give different TCP profile to these clients.



Using the APPQOE policy we have created two policies based on VLAN IDs. The action configured for APPQOE policy will select the profile for the subscriber traffic. On getting the request from client, policy evaluation happens, based on the VLAN ID, corresponding TCP profile is used based on the APPQOE action configured. For instance, in the below configuration when 3G traffic comes in to NetScaler using VLAN1, the APPQOE policy "appqoe_3G" is hit and the corresponding action "action_3G" with 3G_profile is applied for the session.

- add appqoe action action_3G -tcpProfile **3G_profile**
- add appqoe action action_4G -tcpProfile **4G_profile**
- add appqoe policy appqoe_3G -rule "**client.vlan.id.eq(1)**" -action action_3G

- add appqoe policy appqoe_4G -rule "**client.vlan.id.eq(2)**" -action action_4G
- bind lb vserver tcpopt_traffic_manager -policyname appqoe_3G -priority 1
- bind lb vserver tcpopt_traffic_manager -policyname appqoe_4G -priority 2

Policy based TCP Profiles using configuration utility

Navigate to AppExpert -> AppQoE

AppExpert / AppQoE / AppQoE Actions

AppQoE Actions

Add Edit Delete

Create a new AppQoE Action	Action Type
No items	

← Create AppQoE Action

Name*

action_3G

Action Type*

NONE

TCP Profile

3G_profile

Priority

Policy Queue Depth

Queue Depth

DOS Action

Create

Close

← Create AppQoE Policy

Name*

appqoe_3G

Action*

action_3G

Expression*

client.VLAN.ID.EQ(1)

Expression Editor

Operators Saved Policy Expressions Frequently Used Expressions

Evaluate

Create

Close

APPQOE Policy Examples

Some examples for APPQOE policy that can be used for other parameters like source IP, HTTP parameters, subscriber specific information are as follows,

TCP/IP specific rule :

```
add appqoe policy <name> -rule "CLIENT.IP.SRC.EQ(10.12.12.16)" -action <action-name>
```

HTTP specific rule :

```
add appqoe policy apppol1 -rule "HTTP.REQ.URL.CONTAINS(\"5k.html\")" -action appact1
```

```
add appqoe policy apppol2 -rule "HTTP.REQ.URL.CONTAINS(\"500.html\")" -action appact2
```

Subscriber specific rule:

```
add appqoe policy apppol1 -rule "SUBSCRIBER.AVP(250).VALUE.CONTAINS(\"hi\")" -action appact1
```

```
add appqoe policy apppol2 -rule "SUBSCRIBER.SERVICEPATH.IS_NEXT(\"SF1\")" -action appact2
```

This feature leverages the flexibility available in APPQOE policies and actions to dynamically select the TCP profile required for the traffic going through NetScaler.