

## Chapter 17

# Tag Elements Beginning with Q

This chapter lists the configuration tag elements that have names beginning with the letter *q*. The tag names are in alphabetical order. For information about the notation used in this chapter, see Table 2 on page cdv.

For information about the tag elements that client applications use to request, change, and commit configuration information, see the *JUNOScript API Guide* and *NETCONF API Guide*.



**NOTE:** Every tag element in this chapter optionally accepts the `<apply-groups>` or `<apply-groups-except>` tag element and the `<apply-macro>` tag element as children. For brevity, the reference entries do not list these tag elements as children. For information about these tag elements, see `<apply-groups>` on page 606, `<apply-groups-except>` on page 606, and `<apply-macro>` on page 607.

### **<q-pic-large-buffer> (configuration/chassis/fpc/pic)**

<b>Usage</b>	<pre>&lt;configuration&gt;   &lt;chassis&gt;     &lt;fpc&gt;       &lt;pic&gt;         &lt;q-pic-large-buffer&gt;           &lt;small-scale/&gt;           &lt;large-scale/&gt;         &lt;/q-pic-large-buffer&gt;       &lt;/pic&gt;     &lt;/fpc&gt;   &lt;/chassis&gt; &lt;/configuration&gt;</pre>
<b>Description</b>	Run in large delay buffer mode.
<b>Contents</b>	<p><code>&lt;large-scale&gt;</code>—Supports large number of interfaces.</p> <p><code>&lt;small-scale&gt;</code>—Supports less number of interfaces.</p>

**<q-pic-large-buffer> (configuration/chassis/lcc/fpc/pic)**

---

**Usage** <configuration>  
           <chassis>  
             <lcc>  
               <fpc>  
                 <pic>  
                   **<q-pic-large-buffer>**  
                     <small-scale/>  
                     <large-scale/>  
                   **</q-pic-large-buffer>**  
                 </pic>  
               </fpc>  
             </lcc>  
           </chassis>  
         </configuration>

**Description** Run in large delay buffer mode.

**Contents** <large-scale>—Supports large number of interfaces.  
               <small-scale>—Supports less number of interfaces.

**<qos-control> (configuration/services/ggsn/apn)**

---

**Usage** <configuration>  
           <services>  
             <ggsn>  
               <apn>  
                 **<qos-control>**  
                   <profile>...</profile>  
                 **</qos-control>**  
               </apn>  
             </ggsn>  
           </services>  
         </configuration>

**Description** QoS control.

**Contents** <profile>—QoS control profile.

## **<qualified-next-hop> (configuration/logical-systems/ routing-instances/instance/routing-options/rib/static/iso-route)**

---

**Usage** <configuration>  
     <logical-systems>  
         <routing-instances>  
             <instance>  
                 <routing-options>  
                     <rib>  
                         <static>  
                             <iso-route>  
                                 **<qualified-next-hop>**  
                                     <name>*name*</name>   <!-- identifier -->  
                                     <preference>*preference*</preference>  
                                     <metric>*metric*</metric>  
                                     <interface>*interface*</interface>  
                                     <bfd-liveness-detection>...</bfd-liveness-detection>  
                                 **</qualified-next-hop>**  
                             </iso-route>  
                         </static>  
                     </rib>  
                 </routing-options>  
             </instance>  
         </routing-instances>  
     </logical-systems>  
</configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/logical-systems/ routing-instances/instance/routing-options/rib/static/route)**

---

**Usage**

```

<configuration>
  <logical-systems>
    <routing-instances>
      <instance>
        <routing-options>
          <rib>
            <static>
              <route>
                <qualified-next-hop>
                  <name>name</name>    <!-- identifier -->
                  <preference>preference</preference>
                  <metric>metric</metric>
                  <interface>interface</interface>
                  <bfd-liveness-detection>...</bfd-liveness-detection>
                </qualified-next-hop>
              </route>
            </static>
          </rib>
        </routing-options>
      </instance>
    </routing-instances>
  </logical-systems>
</configuration>

```

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/logical-systems/ routing-instances/instance/routing-options/static/iso-route)**

---

**Usage**   <configuration>  
           <logical-systems>  
           <routing-instances>  
           <instance>  
           <routing-options>  
           <static>  
           <iso-route>  
             **<qualified-next-hop>**  
               <name>*name*</name>   <!-- identifier -->  
               <preference>*preference*</preference>  
               <metric>*metric*</metric>  
               <interface>*interface*</interface>  
               <bfd-liveness-detection>...</bfd-liveness-detection>  
             **</qualified-next-hop>**  
           </iso-route>  
           </static>  
           </routing-options>  
           </instance>  
           </routing-instances>  
           </logical-systems>  
         </configuration>

**Description**   Next hop with qualifiers.

**Contents**   <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

          <interface>—Interface of qualified next hop.

          <metric>—Metric of qualified next hop.

          <name>—Next hop to destination.

          <preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/logical-systems/ routing-instances/instance/routing-options/static/route)**

---

**Usage**

```
<configuration>
  <logical-systems>
    <routing-instances>
      <instance>
        <routing-options>
          <static>
            <route>
              <qualified-next-hop>
                <name>name</name>    <!-- identifier -->
                <preference>preference</preference>
                <metric>metric</metric>
                <interface>interface</interface>
                <bfd-liveness-detection>...</bfd-liveness-detection>
              </qualified-next-hop>
            </route>
          </static>
        </routing-options>
      </instance>
    </routing-instances>
  </logical-systems>
</configuration>
```

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/logical-systems/ routing-options/rib/static/iso-route)**

---

**Usage** <configuration>  
           <logical-systems>  
             <routing-options>  
               <rib>  
                 <static>  
                   <iso-route>  
                     **<qualified-next-hop>**  
                       <name>*name*</name>   <!-- identifier -->  
                       <preference>*preference*</preference>  
                       <metric>*metric*</metric>  
                       <interface>*interface*</interface>  
                       <bfd-liveness-detection>...</bfd-liveness-detection>  
                     **</qualified-next-hop>**  
                   </iso-route>  
                 </static>  
               </rib>  
             </routing-options>  
           </logical-systems>  
         </configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/logical-systems/ routing-options/rib/static/route)**

---

**Usage**

```

<configuration>
  <logical-systems>
    <routing-options>
      <rib>
        <static>
          <route>
            <qualified-next-hop>
              <name>name</name>    <!-- identifier -->
              <preference>preference</preference>
              <metric>metric</metric>
              <interface>interface</interface>
              <bfd-liveness-detection>...</bfd-liveness-detection>
            </qualified-next-hop>
          </route>
        </static>
      </rib>
    </routing-options>
  </logical-systems>
</configuration>

```

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.



## **<qualified-next-hop> (configuration/logical-systems/ routing-options/static/iso-route)**

---

**Usage** <configuration>  
           <logical-systems>  
             <routing-options>  
               <static>  
                 <iso-route>  
                   **<qualified-next-hop>**  
                     <name>*name*</name>   <!-- identifier -->  
                     <preference>*preference*</preference>  
                     <metric>*metric*</metric>  
                     <interface>*interface*</interface>  
                     <bfd-liveness-detection>...</bfd-liveness-detection>  
                   **</qualified-next-hop>**  
                 </iso-route>  
               </static>  
             </routing-options>  
           </logical-systems>  
         </configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/logical-systems/ routing-options/static/route)**

---

**Usage** <configuration>  
           <logical-systems>  
             <routing-options>  
               <static>  
                 <route>  
                   **<qualified-next-hop>**  
                     <name>*name*</name>   <!-- identifier -->  
                     <preference>*preference*</preference>  
                     <metric>*metric*</metric>  
                     <interface>*interface*</interface>  
                     <bfd-liveness-detection>...</bfd-liveness-detection>  
                   **</qualified-next-hop>**  
                 </route>  
               </static>  
             </routing-options>  
           </logical-systems>  
         </configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/routing-instances/instance/routing-options/rib/static/iso-route)**

---

**Usage**   <configuration>  
           <routing-instances>  
           <instance>  
           <routing-options>  
           <rib>  
           <static>  
           <iso-route>  
             **<qualified-next-hop>**  
               <name>*name*</name>   <!-- identifier -->  
               <preference>*preference*</preference>  
               <metric>*metric*</metric>  
               <interface>*interface*</interface>  
               <bfd-liveness-detection>...</bfd-liveness-detection>  
             **</qualified-next-hop>**  
           </iso-route>  
           </static>  
           </rib>  
           </routing-options>  
           </instance>  
           </routing-instances>  
         </configuration>

**Description**   Next hop with qualifiers.

**Contents**   <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

          <interface>—Interface of qualified next hop.

          <metric>—Metric of qualified next hop.

          <name>—Next hop to destination.

          <preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/routing-instances/instance/routing-options/rib/static/route)**

---

**Usage**

```

<configuration>
  <routing-instances>
    <instance>
      <routing-options>
        <rib>
          <static>
            <route>
              <qualified-next-hop>
                <name>name</name>    <!-- identifier -->
                <preference>preference</preference>
                <metric>metric</metric>
                <interface>interface</interface>
                <bfd-liveness-detection>...</bfd-liveness-detection>
              </qualified-next-hop>
            </route>
          </static>
        </rib>
      </routing-options>
    </instance>
  </routing-instances>
</configuration>

```

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/routing-instances/instance/ routing-options/static/iso-route)**

---

**Usage**   <configuration>  
           <routing-instances>  
           <instance>  
           <routing-options>  
           <static>  
           <iso-route>  
             **<qualified-next-hop>**  
               <name>*name*</name>   <!-- identifier -->  
               <preference>*preference*</preference>  
               <metric>*metric*</metric>  
               <interface>*interface*</interface>  
               <bfd-liveness-detection>...</bfd-liveness-detection>  
             **</qualified-next-hop>**  
           </iso-route>  
         </static>  
       </routing-options>  
     </instance>  
 </routing-instances>  
</configuration>

**Description**   Next hop with qualifiers.

**Contents**   <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

          <interface>—Interface of qualified next hop.

          <metric>—Metric of qualified next hop.

          <name>—Next hop to destination.

          <preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/routing-instances/instance/routing-options/static/route)**

---

**Usage**   <configuration>  
               <routing-instances>  
                   <instance>  
                       <routing-options>  
                           <static>  
                               <route>  
                                   **<qualified-next-hop>**  
                                       <name>*name*</name>   <!-- identifier -->  
                                       <preference>*preference*</preference>  
                                       <metric>*metric*</metric>  
                                       <interface>*interface*</interface>  
                                       <bfd-liveness-detection>...</bfd-liveness-detection>  
                                   **</qualified-next-hop>**  
                               </route>  
                           </static>  
                       </routing-options>  
                   </instance>  
               </routing-instances>  
           </configuration>

**Description**   Next hop with qualifiers.

**Contents**   <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

                  <interface>—Interface of qualified next hop.

                  <metric>—Metric of qualified next hop.

                  <name>—Next hop to destination.

                  <preference>—Preference of qualified next hop.

## <qualified-next-hop> (configuration/routing-options/rib/static/iso-route)

---

**Usage** <configuration>  
           <routing-options>  
             <rib>  
               <static>  
                 <iso-route>  
                   <qualified-next-hop>  
                     <name>*name*</name>   <!-- identifier -->  
                     <preference>*preference*</preference>  
                     <metric>*metric*</metric>  
                     <interface>*interface*</interface>  
                     <bfd-liveness-detection>...</bfd-liveness-detection>  
                   </qualified-next-hop>  
                 </iso-route>  
               </static>  
             </rib>  
           </routing-options>  
         </configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<qualified-next-hop> (configuration/routing-options/rib/static/route)**

---

**Usage** <configuration>  
           <routing-options>  
             <rib>  
               <static>  
                 <route>  
                   **<qualified-next-hop>**  
                     <name>*name*</name>   <!-- identifier -->  
                     <preference>*preference*</preference>  
                     <metric>*metric*</metric>  
                     <interface>*interface*</interface>  
                     <bfd-liveness-detection>...</bfd-liveness-detection>  
                   **</qualified-next-hop>**  
                 </route>  
               </static>  
             </rib>  
           </routing-options>  
         </configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.



## **<qualified-next-hop> (configuration/routing-options/static/iso-route)**

---

**Usage**   <configuration>  
           <routing-options>  
           <static>  
           <iso-route>  
             **<qualified-next-hop>**  
               <name>*name*</name>   <!-- identifier -->  
               <preference>*preference*</preference>  
               <metric>*metric*</metric>  
               <interface>*interface*</interface>  
               <bfd-liveness-detection>...</bfd-liveness-detection>  
             **</qualified-next-hop>**  
           </iso-route>  
         </static>  
       </routing-options>  
     </configuration>

**Description**   Next hop with qualifiers.

**Contents**   <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

          <interface>—Interface of qualified next hop.

          <metric>—Metric of qualified next hop.

          <name>—Next hop to destination.

          <preference>—Preference of qualified next hop.

**<qualified-next-hop> (configuration/routing-options/static/route)**

---

**Usage** <configuration>  
           <routing-options>  
             <static>  
               <route>  
                 **<qualified-next-hop>**  
                   <name>*name*</name>   <!-- identifier -->  
                   <preference>*preference*</preference>  
                   <metric>*metric*</metric>  
                   <interface>*interface*</interface>  
                   <bfd-liveness-detection>...</bfd-liveness-detection>  
                 **</qualified-next-hop>**  
               </route>  
             </static>  
           </routing-options>  
         </configuration>

**Description** Next hop with qualifiers.

**Contents** <bfd-liveness-detection>—Bidirectional Forwarding Detection (BFD) options.

<interface>—Interface of qualified next hop.

<metric>—Metric of qualified next hop.

<name>—Next hop to destination.

<preference>—Preference of qualified next hop.

## **<quality-of-service> (configuration/services/ggsn/apn/qos-control/profile/default)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <apn>
        <qos-control>
          <profile>
            <default>
              <quality-of-service>
                <name>name</name>    <!-- identifier -->
                <traffic-class>traffic-class-choice</traffic-class>
                <policy>policy-choice</policy>
                <maximum-bit-rate-uplink>kilobits</maximum-bit-rate-uplink>
                <maximum-bit-rate-downlink>kilobits</maximum-bit-rate-downlink>
                <guaranteed-bit-rate-uplink>kilobits</guaranteed-bit-rate-uplink>
                <guaranteed-bit-rate-downlink>kilobits</guaranteed-bit-rate-downlink>
                <transfer-delay>milliseconds</transfer-delay>
              </quality-of-service>
            </default>
          </profile>
        </qos-control>
      </apn>
    </ggsn>
  </services>
</configuration>

```

**Description** Quality of service.

**Contents** <guaranteed-bit-rate-downlink>—Guaranteed downlink bit rate.

<guaranteed-bit-rate-uplink>—Guaranteed uplink bit rate.

<maximum-bit-rate-downlink>—Maximum downlink bit rate.

<maximum-bit-rate-uplink>—Maximum uplink bit rate.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<policy>—QoS policy.

- max-allowed—Maximum QoS allowed.

- `min-required`—Minimum QoS required.
- `must`—Exact QoS required.

`<traffic-class>`—Traffic class.

- `background`—Background quality of service.
- `conversational`—Conversational quality of service.
- `interactive-1`—Interactive priority 1 quality of service.
- `interactive-2`—Interactive priority 2 quality of service.
- `interactive-3`—Interactive priority 3 quality of service.
- `streaming`—Streaming quality of service.

`<transfer-delay>`—Transfer delay.

## **<quality-of-service> (configuration/services/ggsn/apn/qos-control/profile/roaming-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <apn>
        <qos-control>
          <profile>
            <roaming-class>
              <quality-of-service>
                <name>name</name>    <!-- identifier -->
                <traffic-class>traffic-class-choice</traffic-class>
                <policy>policy-choice</policy>
                <maximum-bit-rate-uplink>kilobits</maximum-bit-rate-uplink>
                <maximum-bit-rate-downlink>kilobits</maximum-bit-rate-downlink>
                <guaranteed-bit-rate-uplink>kilobits</guaranteed-bit-rate-uplink>
                <guaranteed-bit-rate-downlink>kilobits</guaranteed-bit-rate-downlink>
                <transfer-delay>milliseconds</transfer-delay>
              </quality-of-service>
            </roaming-class>
          </profile>
        </qos-control>
      </apn>
    </ggsn>
  </services>
</configuration>

```

**Description** Quality of service.

**Contents** <guaranteed-bit-rate-downlink>—Guaranteed downlink bit rate.

<guaranteed-bit-rate-uplink>—Guaranteed uplink bit rate.

<maximum-bit-rate-downlink>—Maximum downlink bit rate.

<maximum-bit-rate-uplink>—Maximum uplink bit rate.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<policy>—QoS policy.

- max-allowed—Maximum QoS allowed.

- `min-required`—Minimum QoS required.
- `must`—Exact QoS required.

`<traffic-class>`—Traffic class.

- `background`—Background quality of service.
- `conversational`—Conversational quality of service.
- `interactive-1`—Interactive priority 1 quality of service.
- `interactive-2`—Interactive priority 2 quality of service.
- `interactive-3`—Interactive priority 3 quality of service.
- `streaming`—Streaming quality of service.

`<transfer-delay>`—Transfer delay.

## **<quality-of-service> (configuration/services/ggsn/apn/qos-control/profile/sgsn-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <apn>
        <qos-control>
          <profile>
            <sgsn-class>
              <quality-of-service>
                <name>name</name>    <!-- identifier -->
                <traffic-class>traffic-class-choice</traffic-class>
                <policy>policy-choice</policy>
                <maximum-bit-rate-uplink>kilobits</maximum-bit-rate-uplink>
                <maximum-bit-rate-downlink>kilobits</maximum-bit-rate-downlink>
                <guaranteed-bit-rate-uplink>kilobits</guaranteed-bit-rate-uplink>
                <guaranteed-bit-rate-downlink>kilobits</guaranteed-bit-rate-downlink>
                <transfer-delay>milliseconds</transfer-delay>
              </quality-of-service>
            </sgsn-class>
          </profile>
        </qos-control>
      </apn>
    </ggsn>
  </services>
</configuration>

```

**Description** Quality of service.

**Contents** <guaranteed-bit-rate-downlink>—Guaranteed downlink bit rate.

<guaranteed-bit-rate-uplink>—Guaranteed uplink bit rate.

<maximum-bit-rate-downlink>—Maximum downlink bit rate.

<maximum-bit-rate-uplink>—Maximum uplink bit rate.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<policy>—QoS policy.

- max-allowed—Maximum QoS allowed.

- `min-required`—Minimum QoS required.
- `must`—Exact QoS required.

`<traffic-class>`—Traffic class.

- `background`—Background quality of service.
- `conversational`—Conversational quality of service.
- `interactive-1`—Interactive priority 1 quality of service.
- `interactive-2`—Interactive priority 2 quality of service.
- `interactive-3`—Interactive priority 3 quality of service.
- `streaming`—Streaming quality of service.

`<transfer-delay>`—Transfer delay.



## **<quality-of-service> (configuration/services/ggsn/apn/service-based-charging/policy-control/static/profile/activation-time/default-roaming-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <apn>
        <service-based-charging>
          <policy-control>
            <static>
              <profile>
                <activation-time>
                  <default-roaming-class>
                    <quality-of-service>
                      <name>name</name>    <!-- identifier -->
                      <service-class>...</service-class>
                      <block-rate>block-rate</block-rate>
                    </quality-of-service>
                  </default-roaming-class>
                </activation-time>
              </profile>
            </static>
          </policy-control>
        </service-based-charging>
      </apn>
    </ggsn>
  </services>
</configuration>

```

**Description** Quality of service for rates.

**Contents** <block-rate>—Rate per block for volume-based and duration-time-based block charging.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<service-class>—Service class.

## **<quality-of-service> (configuration/services/ggsn/apn/service-based-charging/policy-control/static/profile/activation-time/roaming-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <apn>
        <service-based-charging>
          <policy-control>
            <static>
              <profile>
                <activation-time>
                  <roaming-class>
                    <quality-of-service>
                      <name>name</name>    <!-- identifier -->
                      <service-class>...</service-class>
                      <block-rate>block-rate</block-rate>
                    </quality-of-service>
                  </roaming-class>
                </activation-time>
              </profile>
            </static>
          </policy-control>
        </service-based-charging>
      </apn>
    </ggsn>
  </services>
</configuration>

```

**Description** Quality of service for rates.

**Contents** <block-rate>—Rate per block for volume-based and duration-time-based block charging.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<service-class>—Service class.

## **<quality-of-service> (configuration/services/ggsn/apn/service-based-charging/policy-control/static/profile/all-time/default-roaming-class)**

---

**Usage** <configuration>  
     <services>  
         <ggsn>  
             <apn>  
                 <service-based-charging>  
                     <policy-control>  
                         <static>  
                             <profile>  
                                 <all-time>  
                                     <default-roaming-class>  
   **<quality-of-service>**  
   <name>name</name>   <!-- identifier -->  
   <service-class>...</service-class>  
   <block-rate>block-rate</block-rate>  
   **</quality-of-service>**  
                                     </default-roaming-class>  
                                 </all-time>  
                             </profile>  
                         </static>  
                     </policy-control>  
                 </service-based-charging>  
             </apn>  
         </ggsn>  
     </services>  
</configuration>

**Description** Quality of service for rates.

**Contents** <block-rate>—Rate per block for volume-based and duration-time-based block charging.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<service-class>—Service class.

## **<quality-of-service> (configuration/services/ggsn/apn/service-based-charging/policy-control/static/profile/all-time/roaming-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <apn>
        <service-based-charging>
          <policy-control>
            <static>
              <profile>
                <all-time>
                  <roaming-class>
                    <quality-of-service>
                      <name>name</name>    <!-- identifier -->
                      <service-class>...</service-class>
                      <block-rate>block-rate</block-rate>
                    </quality-of-service>
                  </roaming-class>
                </all-time>
              </profile>
            </static>
          </policy-control>
        </service-based-charging>
      </apn>
    </ggsn>
  </services>
</configuration>

```

**Description** Quality of service for rates.

**Contents** <block-rate>—Rate per block for volume-based and duration-time-based block charging.

<name>—Quality of service.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

<service-class>—Service class.

## **<quality-of-service> (configuration/services/ggsn/rule-space/local-policy-control/activation-time/default-roaming-class)**

---

**Usage**

```
<configuration>
  <services>
    <ggsn>
      <rule-space>
        <local-policy-control>
          <activation-time>
            <default-roaming-class>
              <quality-of-service>
                <name>name</name>    <!-- identifier -->
                <access-control-rule>...</access-control-rule>
                <access-control-group>...</access-control-group>
              </quality-of-service>
            </default-roaming-class>
          </activation-time>
        </local-policy-control>
      </rule-space>
    </ggsn>
  </services>
</configuration>
```

**Description** Authorization settings for quality of service.

**Contents**

- <access-control-group>—Authorization settings for access control group.
- <access-control-rule>—Authorization settings for access control rule identifier.
- <name>—Authorized traffic class.
- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

## **<quality-of-service> (configuration/services/ggsn/rule-space/local-policy-control/activation-time/roaming-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <rule-space>
        <local-policy-control>
          <activation-time>
            <roaming-class>
              <quality-of-service>
                <name>name</name>    <!-- identifier -->
                <access-control-rule>...</access-control-rule>
                <access-control-group>...</access-control-group>
              </quality-of-service>
            </roaming-class>
          </activation-time>
        </local-policy-control>
      </rule-space>
    </ggsn>
  </services>
</configuration>

```

**Description** Authorization settings for quality of service.

**Contents**

- <access-control-group>—Authorization settings for access control group.
- <access-control-rule>—Authorization settings for access control rule identifier.
- <name>—Authorized traffic class.
- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

## **<quality-of-service> (configuration/services/ggsn/rule-space/local-policy-control/all-time/default-roaming-class)**

---

**Usage** <configuration>  
     <services>  
         <ggsn>  
             <rule-space>  
                 <local-policy-control>  
                     <all-time>  
                         <default-roaming-class>  
                             **<quality-of-service>**  
                                 <name>*name*</name>   <!-- identifier -->  
                                 <access-control-rule>...</access-control-rule>  
                                 <access-control-group>...</access-control-group>  
                             **</quality-of-service>**  
                         </default-roaming-class>  
                     </all-time>  
                 </local-policy-control>  
             </rule-space>  
         </ggsn>  
     </services>  
</configuration>

**Description** Authorization settings for quality of service.

**Contents** <access-control-group>—Authorization settings for access control group.  
     <access-control-rule>—Authorization settings for access control rule identifier.  
     <name>—Authorized traffic class.

- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.

## **<quality-of-service> (configuration/services/ggsn/rule-space/local-policy-control/all-time/roaming-class)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <rule-space>
        <local-policy-control>
          <all-time>
            <roaming-class>
              <quality-of-service>
                <name>name</name>    <!-- identifier -->
                <access-control-rule>...</access-control-rule>
                <access-control-group>...</access-control-group>
              </quality-of-service>
            </roaming-class>
          </all-time>
        </local-policy-control>
      </rule-space>
    </ggsn>
  </services>
</configuration>

```

**Description** Authorization settings for quality of service.

**Contents**

- <access-control-group>—Authorization settings for access control group.
- <access-control-rule>—Authorization settings for access control rule identifier.
- <name>—Authorized traffic class.
- background—Background quality of service.
- conversational—Conversational quality of service.
- interactive-1—Interactive priority 1 quality of service.
- interactive-2—Interactive priority 2 quality of service.
- interactive-3—Interactive priority 3 quality of service.
- streaming—Streaming quality of service.



## **<query-cc-as> (configuration/services/ggsn/apn/service-based-charging/credit-control)**

---

**Usage**   <configuration>  
           <services>  
           <ggsn>  
           <apn>  
           <service-based-charging>  
           <credit-control>  
           **<query-cc-as>**  
             <credit-control-user>...</credit-control-user>   <!-- mandatory -->  
             <no-credit-control-user>...</no-credit-control-user>   <!-- mandatory -->  
           **</query-cc-as>**  
           </credit-control>  
           </service-based-charging>  
           </apn>  
           </ggsn>  
           </services>  
         </configuration>

**Description**   Credit Control Application System (CC-AS) user query.

**Contents**   <credit-control-user>—Ask CC-AS whether to use credit control.

          <no-credit-control-user>—Settings to use if CC-AS forbids use credit control.

## **<query-name> (configuration/services/ggsn/service-identification/dns-rule/term/from/dns)**

---

**Usage**

```

<configuration>
  <services>
    <ggsn>
      <service-identification>
        <dns-rule>
          <term>
            <from>
              <dns>
                <query-name>
                <is>is</is>
                <not-is>...</not-is>
                <starts-with>starts-with</starts-with>
                <not-starts-with>...</not-starts-with>
                <ends-with>ends-with</ends-with>
                <not-ends-with>...</not-ends-with>
                <contains>...</contains>
                <not-contains>...</not-contains>
              </query-name>
            </dns>
          </from>
        </term>
      </dns-rule>
    </service-identification>
  </ggsn>
</services>
</configuration>

```

**Description** Match query name.

**Contents** <contains>—Matches a substring.

<ends-with>—End matches.

<is>—Exact match.

<not-contains>—Doesn't match a substring.

<not-ends-with>—End doesn't match.

<not-is>—Exclude exact match.

<not-starts-with>—Beginning doesn't match.

<starts-with>—Beginning matches.

**<query-ocs> (configuration/services/ggsn/apn/  
service-based-charging/credit-control)**

---

**Usage**   <configuration>  
          <services>  
          <ggsn>  
          <apn>  
          <service-based-charging>  
          <credit-control>  
          **<query-ocs>**  
            <credit-control-user>...</credit-control-user>  
            <no-credit-control-user>...</no-credit-control-user>  
            <no-valid-answer>...</no-valid-answer>  
          **</query-ocs>**  
          </credit-control>  
          </service-based-charging>  
          </apn>  
          </ggsn>  
          </services>  
          </configuration>

**Description**   OCS user query.

**Contents**   <credit-control-user>—Settings to use if OCS enables credit control for the user.  
  
              <no-credit-control-user>—Settings to use if OCS disables credit control for the user.  
  
              <no-valid-answer>—Settings to use if no valid answer is received from the OCS.

**<queue> (configuration/class-of-service/forwarding-classes)**

---

**Usage** <configuration>  
     <class-of-service>  
         <forwarding-classes>  
             **<queue>**  
                 <name>*name*</name>   <!-- identifier -->  
                 <class-name>*class-name*</class-name>   <!-- mandatory -->  
                 <priority>*priority-choice*</priority>  
                 <policing-priority>*policing-priority-choice*</policing-priority>  
             **</queue>**  
         </forwarding-classes>  
     </class-of-service>  
</configuration>

**Description** Queue number to map to forwarding class.

**Contents** <class-name>—Forwarding class name.

<name>—Queue number.

<policing-priority>—Policing priority for hierarchical policers.

- normal—Normal policing priority.
- premium—Premium policing priority.

<priority>—Fabric priority.

- high—Fabric priority high.
- low—Fabric priority low.

## **<queue> (configuration/dynamic-profiles/class-of-service/forwarding-classes)**

---

**Usage**   <configuration>  
           <dynamic-profiles>  
           <class-of-service>  
           <forwarding-classes>  
             **<queue>**  
               <name>name</name>   <!-- identifier -->  
               <class-name>class-name</class-name>   <!-- mandatory -->  
               <priority>priority-choice</priority>  
               <policing-priority>policing-priority-choice</policing-priority>  
             **</queue>**  
           </forwarding-classes>  
         </class-of-service>  
       </dynamic-profiles>  
     </configuration>

**Description**   Queue number to map to forwarding class.

**Contents**   <class-name>—Forwarding class name.

          <name>—Queue number.

          <policing-priority>—Policing priority for hierarchical policers.

- normal—Normal policing priority.
- premium—Premium policing priority.

          <priority>—Fabric priority.

- high—Fabric priority high.
- low—Fabric priority low.

## **<queues> (configuration/dynamic-profiles/interfaces/interface/unit/compression/rtp)**

---

**Usage** <configuration>  
     <dynamic-profiles>  
         <interfaces>  
             <interface>  
                 <unit>  
                     <compression>  
                         <rtp>  
                             **<queues>**  
                                 <name>*name*</name>   <!-- identifier -->  
                             **</queues>**  
                         </rtp>  
                     </compression>  
                 </unit>  
             </interface>  
         </interfaces>  
     </dynamic-profiles>  
</configuration>

**Description** Queue holding RTP packets. Default is queue 1.

**Contents** <name>—Queue holding RTP packets. Default is queue 1.

- q0—RTP packets assigned to queue 0.
- q1—RTP packets assigned to queue 1.
- q2—RTP packets assigned to queue 2.
- q3—RTP packets assigned to queue 3.

## **<queues> (configuration/interfaces/interface/unit/compression/rtp)**

---

**Usage**   <configuration>  
           <interfaces>  
           <interface>  
           <unit>  
           <compression>  
           <rtp>  
           **<queues>**  
             <name>name</name>   <!-- identifier -->  
           **</queues>**  
           </rtp>  
           </compression>  
           </unit>  
           </interface>  
           </interfaces>  
         </configuration>

**Description**   Queue holding RTP packets. Default is queue 1.

**Contents**   <name>—Queue holding RTP packets. Default is queue 1.

- q0—RTP packets assigned to queue 0.
- q1—RTP packets assigned to queue 1.
- q2—RTP packets assigned to queue 2.
- q3—RTP packets assigned to queue 3.

## **<queues> (configuration/logical-systems/interfaces/interface/unit/compression/rtp)**

---

**Usage**

```

<configuration>
  <logical-systems>
    <interfaces>
      <interface>
        <unit>
          <compression>
            <rtp>
              <queues>
                <name>name</name>    <!-- identifier -->
              </queues>
            </rtp>
          </compression>
        </unit>
      </interface>
    </interfaces>
  </logical-systems>
</configuration>

```

**Description** Queue holding RTP packets. Default is queue 1.

**Contents** <name>—Queue holding RTP packets. Default is queue 1.

- q0—RTP packets assigned to queue 0.
- q1—RTP packets assigned to queue 1.
- q2—RTP packets assigned to queue 2.
- q3—RTP packets assigned to queue 3.



## **<quota-denied-action> (configuration/services/ggsn/apn/service-based-charging/credit-control/profile)**

---

**Usage**   <configuration>  
           <services>  
           <ggsn>  
           <apn>  
           <service-based-charging>  
           <credit-control>  
           <profile>  
             **<quota-denied-action>**  
               <terminate-context/>  
               <free-services/>  
               <allow-service-class>...</allow-service-class>  
             **</quota-denied-action>**  
           </profile>  
         </credit-control>  
       </service-based-charging>  
     </apn>  
   </ggsn>  
</services>  
</configuration>

**Description**   Action to take when user quota is empty.

**Contents**   <allow-service-class>—Allow access to service class.  
               <free-services>—Allow context to access free services.  
               <terminate-context>—Terminate the PDP context.

**<quota-handling> (configuration/services/ggsn/rule-space)**

---

**Usage** <configuration>  
           <services>  
             <ggsn>  
               <rule-space>  
                 **<quota-handling>**  
                   <holding-time-period>seconds</holding-time-period>  
                   <holding-time-infinity/>  
                   <no-quota-handling>...</no-quota-handling>  
                   <user-denied-time>seconds</user-denied-time>  
                   <re-authorization-triggers>...</re-authorization-triggers>  
                 **</quota-handling>**  
               </rule-space>  
             </ggsn>  
           </services>  
         </configuration>

**Description** Quota handling preferences.

**Contents** <holding-time-infinity>—Infinite holding time.

<holding-time-period>—Period of inactivity after which to report the quota.

<no-quota-handling>—Rating group for which quota shall not be requested.

<re-authorization-triggers>—Default triggers for quota re-authorization.

<user-denied-time>—Time to wait before requesting new quota after a request has been denied.