

Sample UPF Configuration

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Sample Configuration

The following is only a sample configuration file provided solely for your reference. You must create and modify your own configuration file according to the specific needs of your deployment.

```
----- snip -----
  active-charging service acs
    bandwidth-policy BWP
      flow limit-for-bandwidth id 1 group-id 2
      flow limit-for-bandwidth id 2 group-id 3
      flow limit-for-bandwidth id 100 group-id 100
     group-id 2 direction uplink peak-data-rate 256000 peak-burst-size 1000 violate-action
 discard
     group-id 2 direction downlink peak-data-rate 200000 peak-burst-size 1000 violate-action
 discard
     group-id 3 direction downlink peak-data-rate 256000 peak-burst-size 1000 violate-action
 discard
     group-id 4 direction uplink peak-data-rate 300000 peak-burst-size 1200 violate-action
 lower-ip-precedence
      group-id 100 direction downlink peak-data-rate-kbps 4294967295 peak-burst-size
4294967295 violate-action discard

    ruledef L3_SERVER
      ip server-ip-address = 209.165.202.150/27
      tcp either-port = 80
    #exit
    ruledef L4_PORT
      tcp either-port = 80
      udp either-port = 80
      multi-line-or all-lines
    #exit
    ruledef L7_HTTP
      http host contains 209.165.202.150
      multi-line-or all-lines
    #exit
    ruledef http-pkts
      http any-match = TRUE
    #exit
    ruledef http-port
      tcp either-port = 80
      rule-application routing
    #exit
```

```
  ruledef ip-any-rule
    ip any-match = TRUE
  #exit
  urr-list urrs
    rating-group 10 urr-id 5
  #exit
  charging-action starent
    content-id 10
    billing-action egcdr
  #exit
  rulebase default
  #exit
  credit-control group default
    pending-traffic-treatment noquota buffer
    pending-traffic-treatment quota-exhausted pass
    usage-reporting quotas-to-report based-on-grant

  rulebase starent
    billing-records egcdr
    dynamic-rule order first-if-tied
    action priority 5 ruledef http-pkts charging-action standard
    action priority 10 ruledef L7_HTTP charging-action starent
    action priority 20 ruledef L4_PORT charging-action starent
    action priority 100 ruledef L3_SERVER charging-action starent
    action priority 10000 ruledef ip-any-rule charging-action starent
    route priority 1 ruledef http-port analyzer http
    egcdr threshold interval 1000
    bandwidth default-policy BWP
  #exit
  traffic-optimization-policy default
  #exit
#exit
context ingress
  interface N3_interface
    ip address 209.165.201.4 209.165.201.5
    ipv6 address abc0:0:0:cb::1/64 secondary
  #exit
  interface N3_interface_LOGICAL loopback
    ip address 209.165.201.4 209.165.201.5
  #exit
  interface N3_interface_LOGICAL2 loopback
    ip address 209.165.201.4 209.165.201.5
  #exit
  interface N4U_interface
    ip address 209.165.201.4 209.165.201.5
    ipv6 address abc0:0:0:cd::1/64 secondary
    ipv6 address abc0:0:0:ca::1/64 secondary
  #exit
  interface N4U_interface_LOGICAL loopback
    ip address 209.165.201.4 209.165.201.5
  #exit
 interface N4_interface
    ip address 209.165.201.4 209.165.201.5
    ipv6 address abc0:0:0:cc::1/64 secondary
  #exit
  interface N4_interface_LOGICAL loopback
    ip address 209.165.201.4 209.165.201.5
  #exit
  subscriber default
  exit
  aaa group default
  #exit
  gtpp group default
  #exit
```

```
  gtpu-service N3-GNB1
    bind ipv4-address 209.165.200.225
  exit
  gtpu-service N3-GNB2
    bind ipv4-address 209.165.201.4
  exit
  gtpu-service control_gtpu
    bind ipv4-address 209.165.201.4
  exit
  sx-service N4
    instance-type userplane
    bind ipv4-address 209.165.201.4
    sx-protocol heartbeat interval 3600
    sx-protocol heartbeat max-retransmissions 1
    sx-protocol association reattempt-timeout 30
  exit
  user-plane-service user-plane-service
    associate gtpu-service N3-GNB1 upf-ingress
    associate gtpu-service control_gtpu cp-tunnel
    associate sx-service N4
    associate fast-path service
    associate control-plane-group default
    load-control capacity 900
  exit
  user-plane-service user-plane-service1
  exit
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N4_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N4_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N3_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N3_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N4_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N3_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N4_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N3_interface
#exit
context egress
  interface N6_interface
    ip address 209.165.201.4 209.165.201.5
    ipv6 address abc0:0:0:cf::1/64 secondary
  #exit
  subscriber default
  exit
  apn starent.com
    pdp-type ipv4 ipv6
    selection-mode subscribed sent-by-ms chosen-by-sgsn
    gtpp group default accounting-context egress
    ip context-name egress
    active-charging rulebase starent
  exit
  aaa group default
  #exit
  gtpp group default
    gtpp attribute local-record-sequence-number
    gtpp dictionary custom24
    gtpp egcdr service-data-flow threshold interval 60
    gtpp egcdr service-data-flow threshold volume downlink 13000
    gtpp egcdr service-data-flow threshold volume uplink 17000
    gtpp egcdr service-data-flow threshold volume total 22222
  #exit
  ipv6 route 2:2:2:2::/64 next-hop abc0::ab:1c:2ff:def9:1ad interface N6_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N6_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N6_interface
  ipv6 route 2:2:2:2::/64 next-hop abc0::ab:1c:2ff:def9:1ab interface N6_interface
  ip route 209.165.201.4 209.165.201.5 209.165.201.6 N6_interface
```

```
  #exit
  control-plane-group default
    sx-association initiated-by-cp
    peer-node-id ipv4-address 209.165.200.225 interface n4
  #exit
  user-plane-group default
  #exit
  port ethernet 1/11
    no shutdown
    vlan 203
      no shutdown
      bind interface N4U_interface ingress
    #exit
    vlan 204
      no shutdown
      bind interface N4_interface ingress
    #exit
    vlan 205
      no shutdown
      bind interface N3_interface ingress
    #exit
    vlan 206
      no shutdown
    #exit
    vlan 207
      no shutdown
      bind interface N6_interface egress
    #exit
  #exit
end
```