



## 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
    gtpv 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
        gtp group default accounting-context egress
        ip context-name egress
        active-charging rulebase starent
    exit
    aaa group default
    #exit
    gtp group default
        gtp attribute local-record-sequence-number
        gtp dictionary custom24
        gtp egcdr service-data-flow threshold interval 60
        gtp egcdr service-data-flow threshold volume downlink 13000
        gtp egcdr service-data-flow threshold volume uplink 17000
        gtp egcdr service-data-flow threshold volume total 2222
    #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
```