



# Sample AMF Configuration

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## Sample Configuration

Use **show** command to view the sample configuration that is provided only for reference. You must create and modify your own configuration file according to the specific needs of your deployment.

```
show running-config | nomore
group nf-mgmt NFMGMT1
  nrf-mgmt-group MGMT
  locality      LOC1
exit
group nrf discovery NRFDISCOVERY
  service type nrf nrf-disc
  endpoint-profile
    name      ep1
    uri-scheme http
    version
      uri-version v1
      full-version 1.1.1.[1]
    exit
  endpoint-name en1
  priority 56
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 8095
  exit
  exit
  exit
exit
group nrf mgmt MGMT
  service type nrf nrf-nfm
  endpoint-profile
    name      mgmt-prof
    uri-scheme http
    endpoint-name mgmt-1
    primary ip-address ipv4 172.16.186.13
    primary ip-address port 8095
  exit
  exit
  exit
exit
amf-global
  amf-name AMF1
```

```

call-control-policy CCP1
  disable-init-csr-reg false
  am-policy skip false
  default-slice name n26 sst 1 sdt 000000
  timers t3560 value 10
  timers t3560 retry 3
  timers t3550 value 5
  timers t3550 retry 3
  timers t3570 value 5
  timers t3570 retry 3
  timers t3522 value 5
  timers t3522 retry 3
  timers tidt value 3480
  timers tguard value 30
  timers tpurge value 0
  timers t3502 value 60
  timers t3512 value 3240
  timers ho-supervisory value 500
  tai-group          VoPS_tailist
  policy context-release force-smf-update true
  feature-support-ie ims-vops-service-3gpp supported true
  feature-support-ie pcscf-restoration-supported true
  feature-support-ie iwk-n26-supported
  feature-support-ie redirection-eps-fallback supported
  security-algo 1 ciphering-algo 5G-EA0
  security-algo 1 integrity-prot-algo 5G-IA0
  security-algo 2 ciphering-algo 128-5G-EA1
  security-algo 2 integrity-prot-algo 128-5G-IA1
  security-algo 3 ciphering-algo 128-5G-EA2
  security-algo 3 integrity-prot-algo 128-5G-IA2
  paging-priority map arp 5 ngap-paging-priority 0
  paging-priority map arp 8 ngap-paging-priority 2
exit
dnn-policy Spectrum-Mobile
  network-element-profile-list smf SMF1
exit
dnn-policy emergency
  network-element-profile-list smf SMF1
exit
dnn-policy ims
  ims-enabled true
  network-element-profile-list smf SMF1
exit
dnn-policy internet
  network-element-profile-list smf SMF1
exit
dnn-policy intershat
  network-element-profile-list smf SMF1
exit
dnn-policy starent
  network-element-profile-list smf SMF1
exit
dnn-policy starent.com
  network-element-profile-list smf SMF1
exit
operator-policy OPR-POLICY-1
  ccp-name          CCP1
  paging-map-name pml
  network-element-profile-list ausf AUSF1
  network-element-profile-list smf SMF1
  network-element-profile-list pcf PCF1
  network-element-profile-list udm UDM1
  network-element-profile-list amf AMF2
  network-element-profile-list nssf NSSF1

```

```
exit
supi-policy 001
  operator-policy-name OPR-POLICY-1
exit
supi-policy 314
  operator-policy-name OPR-POLICY-1
exit
paging-map pm1
  precedence 1
    trigger-type      arp
    arp-value         5
    paging-profile-name pp4
  exit
  precedence 2
    trigger-type      arp
    arp-value         8
    paging-profile-name pp4
  exit
  precedence 3
    trigger-type      dereg
    dereg-value       udm_init
    paging-profile-name pp4
  exit
  precedence 4
    trigger-type      ppi
    ppi-value         7
    paging-profile-name pp1
  exit
  precedence 5
    trigger-type      5qi
    fiveqi-value      5
    paging-profile-name pp4
  exit
  precedence 6
    trigger-type      dereg
    dereg-value       amf_init
    paging-profile-name pp4
  exit
  precedence 7
    trigger-type      ppi
    ppi-value         6
    paging-profile-name pp5
  exit
  precedence 9
    trigger-type      dnn
    dnn-value         Spectrum-Mobile
    paging-profile-name pp4
  exit
exit
paging-profile pm1
exit
paging-profile pp1
  paging-stage 1
    paging-algo pa1
  exit
exit
paging-profile pp2
  paging-stage 1
    paging-algo pa2
  exit
exit
paging-profile pp3
  paging-stage 2
    paging-algo pa4
```

```

exit
paging-stage 3
  paging-algo pa1
exit
paging-stage 4
  paging-algo pa2
exit
paging-stage 5
  paging-algo pa3
exit
exit
paging-profile pp4
  paging-stage 1
    paging-algo pa1
  exit
  paging-stage 2
    paging-algo pa2
  exit
  paging-stage 3
    paging-algo pa3
  exit
  paging-stage 4
    paging-algo pa6
  exit
  paging-stage 5
    paging-algo pa4
  exit
exit
paging-profile pp5
  paging-stage 5
    paging-algo pa5
  exit
exit
paging-algo pa1
  action          last_gnb_last_tai
  max-n-gnb       3
  t3513-timeout   2
  max-paging-attempts 1
exit
paging-algo pa2
  action          last_n_gnb_last_tai
  max-n-gnb       3
  t3513-timeout   3
  max-paging-attempts 2
exit
paging-algo pa3
  action          all_gnb_last_tai
  max-n-gnb       5
  t3513-timeout   4
  max-paging-attempts 3
exit
paging-algo pa4
  action          all_gnb_all_tai
  max-n-gnb       5
  t3513-timeout   5
  max-paging-attempts 5
exit
paging-algo pa5
  action          all_gnb_all_tai
  max-n-gnb       5
  t3513-timeout   10
  max-paging-attempts 5
exit
paging-algo pa6

```

```
    action                all_gnb_remaining_tai_seq
    max-n-gnb             5
    t3513-timeout        5
    max-paging-attempts  1
  exit
exit
profile network-element amf AMF2
  nf-client-profile      AMF2
  failure-handling-profile FH1
  query-params [ target-plmn ]
exit
profile network-element pcf PCF1
  nf-client-profile      PP1
  failure-handling-profile FH1
exit
profile network-element udm UDM1
  nf-client-profile      UP1
  failure-handling-profile FH1
exit
profile network-element ausf AUSF1
  nf-client-profile      AUP1
  failure-handling-profile FH1
exit
profile network-element smf SMF1
  nf-client-profile      SMF1
  query-params [ dnn ]
exit
profile network-element nssf NSSF1
  nf-client-profile      NSSF1
exit
profile nf-client nf-type ausf
  ausf-profile AUP1
  locality LOC1
  priority 30
  service name type nausf-auth
  endpoint-profile EP1
  capacity 30
  uri-scheme http
  endpoint-name EP1
  priority 56
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 8047
  exit
  exit
  exit
  exit
  exit
  exit
profile nf-client nf-type udm
  udm-profile UP1
  locality LOC1
  service name type nudm-sdm
  endpoint-profile EP1
  capacity 30
  uri-scheme http
  version
  uri-version v2
  exit
  exit
  endpoint-name EP1
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 9001
  exit
  exit
```

```

exit
service name type nudm-uecm
endpoint-profile EP1
  capacity 30
  uri-scheme http
  endpoint-name EP1
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 9001
exit
exit
exit
exit
exit
exit
profile nf-client nf-type pcf
pcf-profile PP1
  locality LOC1
  priority 30
  service name type npcfc-am-policy-control
  endpoint-profile EP1
  capacity 30
  uri-scheme http
  endpoint-name EP1
  priority 30
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 9082
  exit
  endpoint-name EP2
  priority 20
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 9082
  exit
  exit
  exit
  exit
  exit
  exit
profile nf-client nf-type amf
amf-profile AMF2
  locality LOC1
  priority 56
  service name type namf-comm
  endpoint-profile EP1
  capacity 30
  priority 30
  uri-scheme http
  endpoint-name EP1
  priority 30
  primary ip-address ipv4 172.16.186.13
  primary ip-address port 9052
  exit
  exit
  exit
  exit
  exit
profile nf-client nf-type smf
smf-profile SMF1
  locality LOC1
  priority 56
  service name type nsmf-pdusession
  endpoint-profile EP1
  capacity 30
  priority 30

```

```
        uri-scheme http
        endpoint-name EP1
        priority 30
        primary ip-address ipv4 172.16.186.13
        primary ip-address port 9050
    exit
    exit
    exit
    exit
    exit
    exit
    profile nf-pair nf-type NRF
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
    exit
    profile nf-pair nf-type UDM
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
        cache invalidation true
    exit
    profile nf-pair nf-type AMF
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
    exit
    profile nf-pair nf-type SMF
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
        cache invalidation false
    exit
    profile nf-pair nf-type AUSF
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
        cache invalidation true
    exit
    profile nf-pair nf-type PCF
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
        cache invalidation true
    exit
    profile nf-pair nf-type NSSF
        nrf-discovery-group NRFDISCOVERY
        locality client LOC1
        locality preferred-server LOC1
        locality geo-server GEO
    exit
    profile nf-client-failure nf-type udm
    profile failure-handling FH1
        service name type nudm-uecm
    exit
    exit
    exit
    profile nf-client-failure nf-type pcf
```

```

profile failure-handling FH1
  service name type npcf-am-policy-control
  message type PcfAmfPolicyControlCreate
  status-code httpv2 201
  action continue
  exit
  exit
  exit
  exit
  exit
amf-services AMF
  amf-name          AMF1
  validate-Tais    false
  locality          LOC1
  operator-policy-name OPR-POLICY-1
  peer-mme gummei mcc 311 mnc 480 group-id 32888 mme-code 36 address 172.16.171.13
  peer-mme gummei mcc 314 mnc 020 group-id 32777 mme-code 1 address 172.16.171.13
  peer-mme tai-match priority 1 mcc 311 mnc 480 tac 23 address 172.16.171.13
  peer-mme tai-match priority 1 mcc 314 mnc 020 tac 23 address 172.16.171.13
  pgw fqdn Spectrum-Mobile smf-network-element-profile SMF1
  guamis mcc 314 mnc 020 region-id 206 set-id 129 pointer 5
  tai-groups TAI-GRP1
  exit
  slices name SLICE1
    sst 3
    sdt 000000
  exit
  slices name SLICE2
    sst 1
    sdt 000000
  exit
  exit
  tai-group name TAI-GRP1
  tais name TAI-LIST-1
    mcc 314 mnc 020
    tac list [ 5431 5432 5433 ]
  exit
  exit
  tais name TAI-LIST-2
    mcc 314 mnc 020
    tac list [ 20 21 22 ]
  exit
  exit
  tais name TAI-LIST-3
    mcc 001 mnc 00
    tac list [ 20 30 40 ]
  exit
  exit
  tais name TAI-LIST-4
    mcc 314 mnc 020
    tac list [ 5440 5441 5442 5443 5444 5445 5446 ]
  exit
  exit
  tais name TAI-LIST-5
    mcc 314 mnc 020
    tac list [ 50 51 52 ]
  exit
  exit
  exit
  tai-group name TAI-GRP2
  tais name TAI-LIST-1
    mcc 314 mnc 020
    tac list [ 5434 5435 5436 ]
  exit

```



```
exit
tais name TAI-LIST-2
  mcc 314 mnc 020
  tac list [ 5437 5438 5439 5440 ]
exit
exit
tais name TAI-LIST-3
  mcc 314 mnc 020
  tac list [ 40 41 42 43 44 ]
exit
exit
exit
tai-group name VoPS_tailist
  tais name tai-list1
  ims-voice-over-ps-supported true
  mcc 314 mnc 020
  tac list [ 1111 2222 3333 ]
exit
exit
infra metrics verbose load-balancer
  level production
exit
client outbound host ping timeout 3000
client outbound host ping interval 5000
instance instance-id 1
  endpoint li
    replicas 1
    nodes 2
    vip-ip 172.16.171.4
    vip-ip 172.16.171.8
  exit
  endpoint sctp
    replicas 2
    nodes 2
    vip-ip 172.17.0.8 vip-port 1000
    vip-ipv6 2001:172:17::8 vip-ipv6-port 1000
  exit
  endpoint nodemgr
    replicas 1
    nodes 2
  exit
  endpoint gtp
    nodes 1
    retransmission timeout 2 max-retry 5
    vip-ip 172.16.171.8
  exit
  endpoint service
    replicas 2
    nodes 2
  exit
  endpoint protocol
    replicas 2
    nodes 2
    vip-ip 172.16.171.8
  exit
  endpoint ngap
    replicas 2
  exit
  endpoint sbi
    replicas 2
    loopbackPort 8091
    instancetype IPv4
    vip-ip 172.16.186.8 vip-port 8070
```

```

exit
exit
logging level application error
logging level transaction error
logging level tracing error
logging name amf-protocol-ep.amf-app.nas level application error
logging name amf-protocol-ep.amf-app.nas level transaction error
logging name amf-rest-ep.amf-app.nrf level application error
logging name amf-service.amf-app.Config level application error
logging name amf-service.amf-app.Config level transaction error
logging name amf-service.amf-app.NwConfig level application error
logging name amf-service.amf-app.NwConfig level transaction error
logging name amf-service.amf-app.ausf level application error
logging name amf-service.amf-app.ausf level transaction error
logging name amf-service.amf-app.gen level application error
logging name amf-service.amf-app.gen level transaction error
logging name amf-service.amf-app.messageprocessor level application error
logging name amf-service.amf-app.messageprocessor level transaction error
logging name amf-service.amf-app.nas level application error
logging name amf-service.amf-app.nas level transaction error
logging name amf-service.amf-app.ngap level application error
logging name amf-service.amf-app.ngap level transaction error
logging name amf-service.amf-app.pcf level application error
logging name amf-service.amf-app.pcf level transaction error
logging name amf-service.amf-app.subs level application error
logging name amf-service.amf-app.subs level transaction error
logging name amf-service.amf-app.udm level application error
logging name amf-service.amf-app.udm level transaction error
logging name infra.cache_client.core
logging name infra.config.core
logging name infra.message_log.core
logging name infra.resource_monitor.core
logging name infra.sctp_server.core level application error
logging name infra.topology.core
deployment
  app-name          amf5
  cluster-name      clu005
  dc-name           sys005
  resource cpu 9000
  logical-nf-instance-id 5
exit
k8 label protocol-layer key smi.cisco.com/node-type-2 value protocol
exit
k8 label service-layer key smi.cisco.com/node-type-3 value service
exit
k8 label oam-layer key smi.cisco.com/node-type value oam
exit
k8 label sctp-layer key smi.cisco.com/node-type-2 value protocol
exit
instances instance 1
  system-id sys005
  cluster-id clu005
  slice-name 1
exit
local-instance instance 1
datastore notification-ep host 172.16.184.8
datastore notification-ep port 8012
datastore session-db endpoints datastore-ep-session.cdl-amf.svc.cluster.local
  port 8882
exit
system mode running
helm default-repository base-repos
helm repository base-repos
  url https://charts.171.11.189.31.nip.io/amf.2021.04.0.i112

```

```
exit
k8s name          amf-cndp-b19-3
k8s namespace    amf-ins5
k8s nf-name      amf
k8s registry     docker.171.11.189.31.nip.io/amf.2021.04.m0.i26
k8s single-node  false
k8s use-volume-claims true
k8s ingress-host-name 10.84.125.78.nip.io
k8s nodes amf-cndp-b19-3-master-1
  node-type      master
  worker-type    master
exit
k8s nodes amf-cndp-b19-3-master-2
  node-type      master
  worker-type    master
exit
k8s nodes amf-cndp-b19-3-master-3
  node-type      master
  worker-type    master
exit
aaa authentication users user admin
  uid            1117
  gid            1117
  password       $1$iQJ02wld$7jGfAw6qA3j0mfXeSvk5e/
  ssh_keydir    /tmp/admin/.ssh
  homedir       /tmp/admin
exit
aaa ios level 0
  prompt "\h> "
exit
aaa ios level 15
  prompt "\h# "
exit
aaa ios privilege exec
  level 0
    command action
    exit
    command autowizard
    exit
    command enable
    exit
    command exit
    exit
    command help
    exit
    command startup
    exit
  level 15
    command configure
    exit
  exit
exit
nacm write-default deny
nacm groups group LI
  user-name [ liadmin ]
exit
nacm groups group admin
  user-name [ admin ]
exit
nacm rule-list admin
  group [ admin ]
  rule li-deny-tap
  module-name          lawful-intercept
```

```

    path                /lawful-intercept
    access-operations *
    action               deny
  exit
rule li-deny-clear
  module-name          tailf-mobile-amf
  path                 /clear/lawful-intercept
  access-operations *
  action               deny
  exit
rule any-access
  action permit
  exit
exit
nacm rule-list confd-api-manager
  group [ confd-api-manager ]
  rule any-access
    action permit
  exit
exit
nacm rule-list ops-center-security
  group [ * ]
  rule change-self-password
    module-name        ops-center-security
    path               /smiuser/change-self-password
    access-operations  exec
    action              permit
  exit
rule smiuser
  module-name          ops-center-security
  path                 /smiuser
  access-operations  exec
  action              deny
  exit
exit
nacm rule-list lawful-intercept
  group [ LI ]
  rule li-accept-tap
    module-name        lawful-intercept
    path               /lawful-intercept
    access-operations *
    action              permit
  exit
rule li-accept-clear
  module-name          tailf-mobile-amf
  path                 /clear/lawful-intercept
  access-operations *
  action              permit
  exit
exit
nacm rule-list any-group
  group [ * ]
  rule li-deny-tap
    module-name        lawful-intercept
    path               /lawful-intercept
    access-operations *
    action              deny
  exit
rule li-deny-clear
  module-name          tailf-mobile-amf
  path                 /clear/lawful-intercept
  access-operations *
  action              deny

```

```
exit  
exit
```

