

Stateless NGAP Protocol EP Deployment

Table 1: Feature History

Feature Name	Release Information	Description
Stateless NGAP Protocol EP Deployment	2025.03.0	You can now enable horizontal scaling of AMF NGAP protocol pods by transitioning from an existing Active-Standby mode of deployment to an Active-Active deployment model. Command introduced: **amf-services** *amf_service_name* **{ stateless-proto-ep enabled }**— Used to enable the stateless protocol EP deployment. **Default Setting**: Disabled – Configuration Required

We highly recomment to use the NGAP stateless protocol feature for higher scalability and more robust deployment model.

Note Rolling upgrade is not supported when migrating from a replication-based (i.e., stateful) deployment model to a stateless deployment mode. However, rolling upgrade works seamlessly across different software versions within the stateless mode of protocol EP deployment.

The load distribution mechanism is based on gNBs connected to AMF, if some gNB's are overloaded with subscribers, there may be some variation in the resource consumption of NGAP protocol pods.

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Guidelines for Stateless Protocol EP Deployment

Follow these guidelines when implementing this feature:

- Enabling/Disabling of NGAP stateless protocol feature requires AMF ops-cnter shut/start.
- Default configuration includes two Protocol-EP pods deployed in Active-Active mode.
- Scaling up to five Protocol-EP pods is supported and requires AMF ops center shut/start.

Enable Stateless Protocol EP Deployment

Procedure

Step 1 Enter the amf-services configuration mode.

amf-services *amf_service_name*

Step 2 Enable the stateless protocol EP deployment for the specified amf service.

stateless-proto-ep enabled

Step 3 Save and commit the configuration.

Step 4 To disable the stateless protocol EP deployment, run the following command.

```
no amf-services am1 stateless-proto-ep
```



Note

- Enabling or disabling the stateless protocol feature requires ops-center shut/start. It is not recommended to enable/disable this feature at runtime as it impacts active sessions.
- The feature is disabled by default.
- Any change in the number of Protocol-EP pods require a shutdown and start of the AMF ops-center.

Scale Stateless Protocol EP Deployment

Procedure

Step 1 Configure the instance instance-id in the AMF configuration mode.

instance instance-id *instance_id*

Step 2 Use the following command to scale the deployment by setting the number of replicas per node.

endpoint ngap replicas *replica_count*

Step 3 Use the following command to scale the deployment by setting the number of nodes.

endpoint ngap nodes *node_count*

Step 4 Save and commit the configuration.