

AMF performance improvement by ULB integration and cilium

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AMF ULB integration with Cilium plugin

AMF ULB integration with Cilium plugin is a feature that:

- replace static VIP-based traffic with dynamic ULB-based distribution for SCTP pods,
- enable support for Cilium plugin for advanced container networking and scalable pod placement, and
- provide active-active SCTP operation and efficient SCTP connection distribution during pod failures.

The ULB operates as a separate pod within a different namespace but is part of the same AMF deployment. It is responsible for distributing SCTP traffic

Table 1: Feature History Table

Feature Name	Release Information	Feature Description
AMF ULB integration with Cilium plugin	2026.03.0	The AMF ULB integration with the Cilium plugin introduces dynamic SCTP pod traffic distribution, replacing static VIP-based routing. It supports advanced container networking and scalable pod placement through the Cilium plugin, enabling active-active SCTP operation and efficient connection distribution during pod failures.

Configure AMF ULB integration with Cilium plugin

Before you begin

Before you begin, ensure your Kubernetes cluster and AMF deployment meet all operational prerequisites for ULB.

Follow these steps to configure AMF ULB integration with Cilium plugin.

Procedure

Step 1 Configure SCTP pod resources and interfaces using the AMF CLI.

instance instance-id *instance_id* **{ endpoint** *endpoint_name* **{ service** *service_name* **cpu request** *cpu_resource_request* **| cpu max-process** *cpu_max_process* **| memory request** *memory_request* **| memory limit** *memory_limit* **| replicas** *replicas_value* **| nodes** *nodes_value* **| nad-policy** *nad_policy_name* **| interface** *interface_name* **{ internal-port { livenessEpPort** *livenessEpPort_value* **} } } } }**

Use the AMF CLI to configure SCTP pod parameters, including CPU, memory, replica count, node number, network policy, and interfaces.

- Adjust `cpu request`, `replicas`, and `nad-policy` values according to your planned capacity and traffic needs.

Note
When the livenessEpPort is configured in ULB deployment mode, the KeepAlived port must not be configured.

The NAD policy name should be the same as configured in the ULB Ops Center. Refer to the ULB Configuration Guide for detailed instructions.

Step 2 Enable non-host networking mode for SCTP pods using the AMF CLI.

amf-services *amf_service_name* **{ non-host-mode sctp }**

Example:

```
[amf] amf(config-amf-services-am1)# non-host-mode sctp
[amf] amf(config-amf-services-am1)# commit
```

Step 3 Verify AMF and SCTP pod running configuration and operational status.

Example:

```
[amf] amf# show running-config amf-services am1
amf-services am1 amf-name AMF
non-host-mode sctp
```

Note Enabling / disabling non-host mode deployment configuration requires ops center shut and start.