

Open Source MANO

Onboarding tutorial with an open source
network function Kamailio

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Open Source
MANO

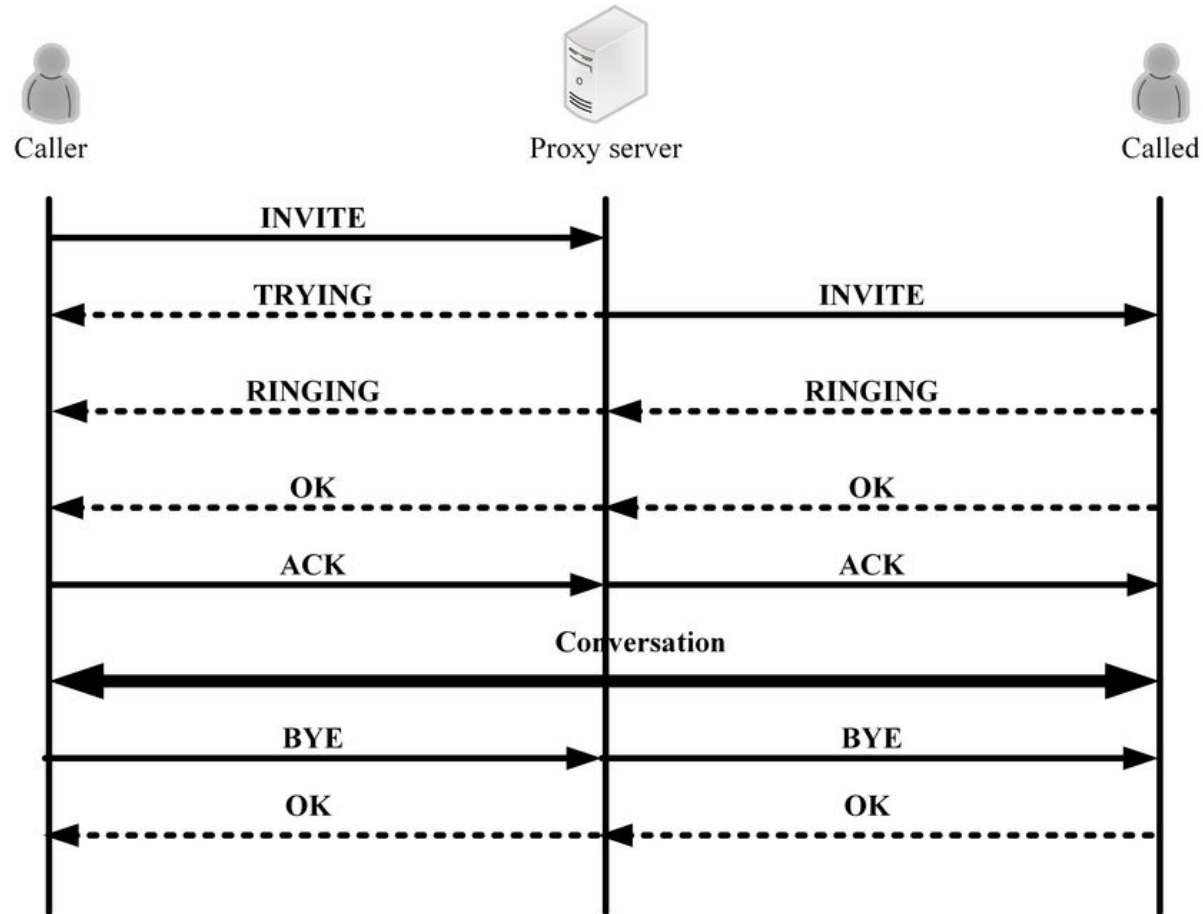
Onboarding tutorial with an open source network function Kamailio

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Introduction to Kamailio

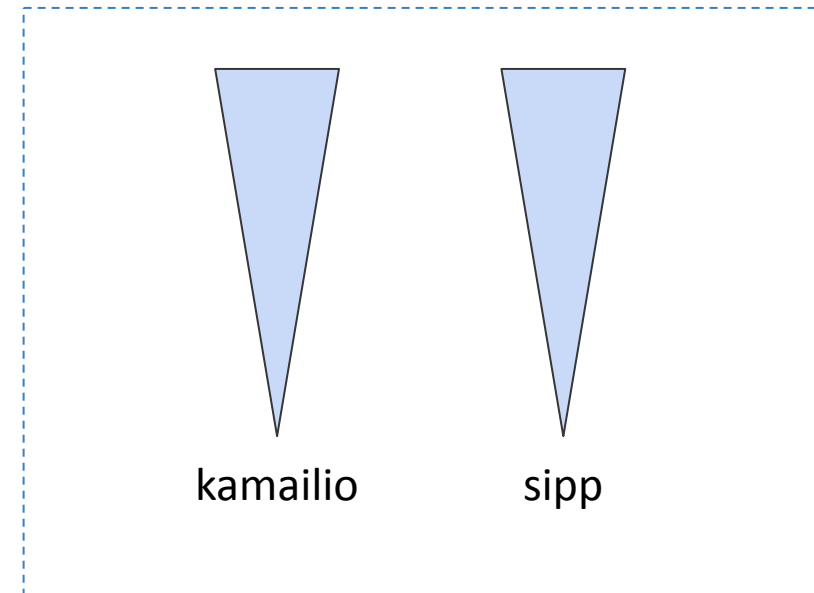
- Robust and Performant SIP (RFC3261) Server
- SIP Routing Capabilities
- Transport Layers
- Asynchronous Processing
- Secure Communication
- IP and DNS
- Accounting
- IMS

Introduction to Kamailio



Kamailio Network Service

- Containerized Network Function
- 2 workloads
 - Kamailio: SIP Server
 - Sipp: SIP Client



Containerized Network Function

- VNFd and NSd:

<https://osm.etsi.org/gitlab/vnf-onboarding/osm-packages/-/tree/master/charm-packages/kamailio>

- Kamailio operator:

<https://github.com/davigar15/kamailio-operator>

- Sipp operator:

<https://github.com/davigar15/sipp-operator>

Onboarding steps

Add VIM account

```
$ osm vim-create --name hackfest --account_type dummy
```

Add K8s cluster

```
$ osm k8scluster-add --creds kubeconfig.yaml \  
    --version v1 \  
    --vim hackfest \  
    --k8s-nets '{"net1": osm-ext}' \  
    --description "K8s cluster" hackfest-k8s
```

IMPORTANT! HACKFEST PARTICIPANTS:
These steps were already made for you.

Upload VNFd and NSd

```
$ git clone https://osm.etsi.org/gitlab/vnf-onboarding/osm-packages.git && cd osm-packages/charm-packages/kamailio
```

```
$ osm nfpkg-create kamailio_knf/
```

```
$ osm nspkg-create kamailio_ns/
```

Deploy NS instance

```
$ osm ns-create --ns_name kamailio-k8s --nsd_name kamailio_ns --vim_account hackfest
```


Check the state of the Network Service

```
$ osm ns-list
```

ns instance name	id	date	ns state	current operation	error details
kamailio-k8s	a555d879-26ac-436f-9504-3242ca0f1520	2022-01-21T13:13:04	READY	IDLE (None)	N/A

To get the history of all operations over a NS, run "osm ns-op-list NS_ID"

For more details on the current operation, run "osm ns-op-show OPERATION_ID"

Check the deployed list of Network Functions

```
$ osm vnf-list
```

vnf id	name	ns id	vnf member index	vnfd name	vim account id	ip address
e1c6306f-...	-	a555d879-...	kamailio	kamailio_cnf	f47c57f5-9870-43fc-9bbe-61fcae571a56	None

Execute day-2 operations

Stop the Kamailio service

```
$ osm ns-action --action_name stop \  
                --vnf_name kamailio \  
                --kdu_name kamailio-kdu \  
                kamailio-k8s
```

Start the Kamailio service

```
$ osm ns-action --action_name start \  
                --vnf_name kamailio \  
                --kdu_name kamailio-kdu \  
                kamailio-k8s
```

Remove the network service

```
$ osm ns-delete kamilio-k8s -wait
```

Remove the descriptors

```
$ osm nsd-delete kamilio_ns
```

```
$ osm vnfd-delete kamilio_cnf
```

What's next?

“What are day-2 operations?”

- Define day-2 operations
- Explain how to add day-2 operations to NF
- Focus on K8s