



# HA Configuration for IPV6 Address

Motadata NMS



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## 1. Overview

The document describes the HA configuration for IPV6 address server.

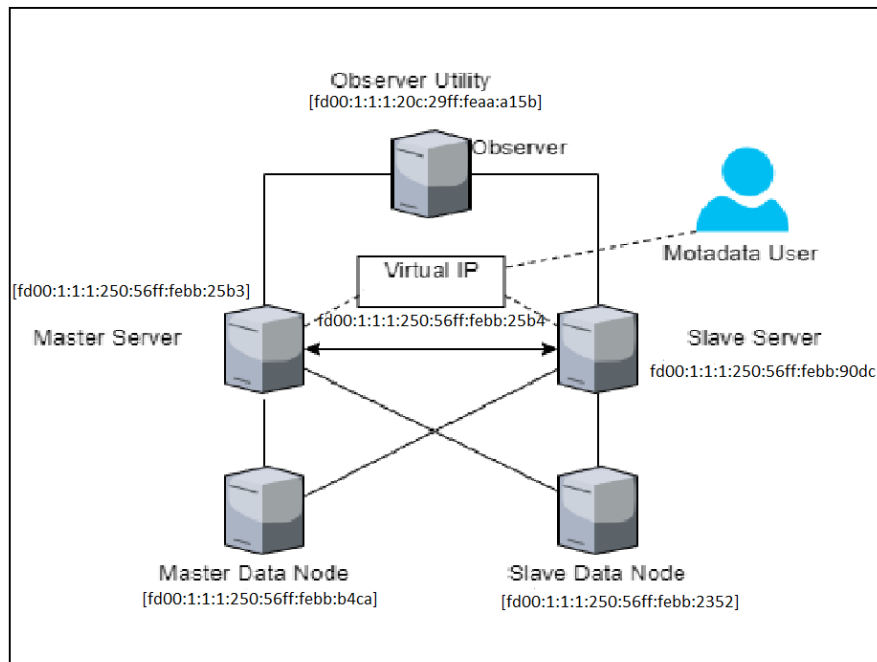
## 2. Distributed Scenario

### 2.1. HA Configuration

#### IP Address

Master server	fd00:1:1:1:250:56ff:febb:25b3
Slave server	fd00:1:1:1:250:56ff:febb:90dc
Master Data Node	fd00:1:1:1:250:56ff:febb:b4ca
Slave Data Node	fd00:1:1:1:250:56ff:febb:2352
Observer Utility	fd00:1:1:1:20c:29ff:feaa:a15b
Virtual IP	fd00:1:1:1:250:56ff:febb:25b4

#### Diagram



## 2.2. Master – Slave Server Configuration

### Master Server Configuration

Please do the required configuration in the below mentioned configuration file:

- Cluster-conf.yml file.
- db-engine-conf.yml file.
- nsq-conf.yml file.

#### Cluster-conf.yml

```
root@master-server:/motadata/motadata/config# cat cluster-conf.yml
installation-type: 1
target-hosts: fd00:1:1:1:250:56ff:febb:90dc,fd00:1:1:1:250:56ff:febb:2352
config-db-host: '[fd00:1:1:1:250:56ff:febb:25b3]'
```

1. Connect with the Master Server – fd00:1:1:1:250:56ff:febb:25b3
2. Open the /motadata/motadata/config/cluster-conf.yml file.
3. Configure installation type to 1.
4. Configure target hosts with slave and slave data Node IP:  
fd00:1:1:1:250:56ff:febb:90dc,fd00:1:1:1:250:56ff:febb:2352
5. Config-db-host to Master IP: fd00:1:1:1:250:56ff:febb:25b3
6. Configure Master-host to VIP : fd00:1:1:1:250:56ff:febb:25b4
7. Configure Current-host to Master server's IP: fd00:1:1:1:250:56ff:febb:25b3
8. Save and Exit the file.

**Note:** In case of Multibox server setup i.e Master-DN, observer, slave Master-DN. "report-db-host" parameter is not required.



### DB-engine-conf.yml

```

root@master-server:/motadata/motadata/config# cat db-engine-conf.yml
#db engine host
host: "[fd00:1:1:1:250:56ff:febb:b4ca]"

#other replicated clickhouse hosts
replication-host: "[fd00:1:1:1:250:56ff:febb:2352]"

#db engine port
port: 8123

connection-timeout: 60

query-connection-timeout: 200

#ssl connection parameter can be enabled/disabled
ssl-connection: "disabled"

#default ssl port
ssl-port: 8444

```

1. Open /motadata/motadata/config/db-engine-conf.yml file.
2. Configure host IP with Master data node IP: [fd00:1:1:1:250:56ff:febb:b4ca].
3. Configure replication-host with slave data node IP: [fd00:1:1:1:250:56ff:febb:2352]

### Nsq-conf.yml file

```

root@master-server:/motadata/motadata/config# cat nsq-conf.yml
# nsq host
host: "[fd00:1:1:1:250:56ff:febb:25b4]"
#nsq port
port: 4150
#nsq lookupd port
lookupd-port: 4160
#nsq lookup port
lookup-port: 4161
#nsq http port
lookup-http-port: 4151
#nsq message in memory
message-queue-size: 20000
#nsq message timeout (seconds)
message-timeout: 600
#nsq message size(bytes)
max-message-size: 200000000
#metric db insert batch size
metric-db-batch-size: 20000
#nsq consumer helper threads
max-message-helper: 4
#nsq message in memory when cluster enabled
cluster-message-queue-size: 0
#ssl connection
ssl-connection: disabled
#ssl port
ssl-port: 4152

```

1. Open /motadata/motadata/config/nsq-conf.yml file.
2. Configure host with master server's VIP: [fd00:1:1:1:250:56ff:febb:25b4].



## 2.3. Slave Server Configuration

Please do the required configuration in the below mentioned configuration file.

- Cluster-conf.yml file
- db-engine-conf.yml file
- nsq-conf.yml file

### Cluster-conf.yml

```
root@master:/motadata/motadata/config# cat cluster-conf.yml
installation-type: 2
target-hosts: fd00:1:1:1:250:56ff:febb:25b3,fd00:1:1:1:250:56ff:febb:b4ca
config-db-host: '[fd00:1:1:1:250:56ff:febb:90dc]'
master-host: '[fd00:1:1:1:250:56ff:febb:25b4]'
current-host: '[fd00:1:1:1:250:56ff:febb:90dc]'
query-backup-duration: 2
cluster-migration-strict-bind: false
config-db-batch-size: null
config-db-flush-time: null
motadata-observer-host: '[fd00:1:1:1:20c:29ff:feaa:a15b]'
server-type: 0
report-db-host: ''

root@master:/motadata/motadata/config#
```

1. Connect with the slave server – fd00:1:1:1:250:56ff:febb:90dc.
2. Open /motadata/motadata/config/cluster-conf.yml file.
3. Configure installation type to 2
4. Configure target hosts with Master server and Master data node,  
IP: fd00:1:1:1:250:56ff:febb:25b3,fd00:1:1:1:250:56ff:febb:b4ca
5. Configure config-db-host with slave master's IP: [fd00:1:1:1:250:56ff:febb:90dc]
6. Configure master-host with master server's VIP: [fd00:1:1:1:250:56ff:febb:25b4]
7. Current-host to slave master server's IP: fd00:1:1:1:250:56ff:febb:90dc
8. Save and Exit the file.

### DB-engine-conf.yml

```
root@master:/motadata/motadata/config# cat db-engine-conf.yml
#db engine host
host: "[fd00:1:1:1:250:56ff:febb:2352]"

#other replicated clickhouse hosts
replication-host: "[fd00:1:1:1:250:56ff:febb:b4ca]"

#db engine port
port: 8123

connection-timeout: 60

query-connection-timeout: 200

#ssl connection parameter can be enabled/disabled
ssl-connection: "disabled"

#default ssl port
ssl-port: 8444

#default clickhouse-ssl certificate path
ssl-certificate-path: "/etc/clickhouse-server/server.crt"
```

1. Open /motadata/motadata/config/db-engine-conf.yml file.
2. Configure host with slave data node IP: fd00:1:1:1:250:56ff:febb:2352
3. Configure replication-host with master data node IP: fd00:1:1:1:250:56ff:febb:b4ca



### Nsq-conf.yml file

```
root@master:/motadata/motadata/config# cat nsq-conf.yml
"lookupd-port": "4160"
"max-message-size": "400000000"
"max-message-helper": "4"
"lookup-http-port": "4151"
"message-queue-size": "20000"
"ssl-port": "4152"
"metric-db-batch-size": "20000"
"port": "4150"
"message-timeout": "600"
"lookup-port": "4161"
"host": "[fd00:1:1:1:250:56ff:febb:25b4]"
"cluster-message-queue-size": "0"
"ssl-connection": "disabled"
```

1. Open /motadata/motadata/config/nsq-conf.yml file.
2. Configure host with master server's VIP: fd00:1:1:1:250:56ff:febb:25b4.

## 2.4. Master-Slave Data Node

### Configure Master Data Node

Please do the required configuration in the below mentioned configuration file.

- Cluster-conf.yml file.

### Cluster-conf.yml

```
root@ubuntu:/motadata/motadata/config# cat cluster-conf.yml
installation-type: 2
report-db-host: '[fd00:1:1:1:250:56ff:febb:b4ca]'
master-host: '[fd00:1:1:1:250:56ff:febb:25b4]'
current-host: '[fd00:1:1:1:250:56ff:febb:b4ca]'
query-backup-duration: 2
```

1. Connect with the master data node IP – fd00:1:1:1:250:56ff:febb:b4ca.
2. Open /motadata/motadata/config/cluster-conf.yml file.
3. Configure installation type to 2.
4. Configure master-host with master server's VIP: fd00:1:1:1:250:56ff:febb:25b4
5. Configure current-host with master data node IP: fd00:1:1:1:250:56ff:febb:b4ca
6. Save and exit the file.



## Configure Slave Data Node

Please do the required configuration in the below mentioned configuration file.

- Cluster-conf.yml file.

### Cluster-conf.yml

```
root@ubuntu:/motadata/motadata/config# cat cluster-conf.yml
installation-type: 2
report-db-host: '[fd00:1:1:1:250:56ff:febb:2352]'
```

1. Connect with the slave data node IP – fd00:1:1:1:250:56ff:febb:2352.
2. Open /motadata/motadata/config/cluster-conf.yml file.
3. Configure installation type to 2.
4. Configure report-db-host with slave data node IP – fd00:1:1:1:250:56ff:febb:2352
5. Configure master-host with master server's VIP: fd00:1:1:1:250:56ff:febb:25b4
6. Configure current-host to slave server's data node IP: fd00:1:1:1:250:56ff:febb:2352
7. Save and Exit the file.

## 2.5. Configure Observer Utility

### Observer-conf.yml

```
root@ubuntu:/motadata/motadata/config# cat observer-conf.yml
vip-ip: fd00:1:1:1:250:56ff:febb:25b4
dns-server-type: ''
dns-zone: ''
dns-host: ''
dns-tsig-key-value: ''
dns-password: ''
report-db-host: fd00:1:1:1:250:56ff:febb:b4ca, fd00:1:1:1:250:56ff:febb:2352
current-observer-host: fd00:1:1:1:20c:29ff:feaa:a15b
reconnect-time: '60'
down-target-host: ''
log-retention-days: '2'
config-db-host: fd00:1:1:1:250:56ff:febb:25b3, fd00:1:1:1:250:56ff:febb:90dc
dns-time-to-live: '3600'
dns-timeout: '30'
ssh-port: '22'
target-host: fd00:1:1:1:250:56ff:febb:90dc:8080
rpe-target-host: ''
dns-tsig-key-algorithm: ''
dns-username: ''
rpe-observer-enable: enable
dns-switch-over: disable
dns-port: ''
ssh-username: fd00:1:1:1:250:56ff:febb:b4ca|root, fd00:1:1:1:250:56ff:febb:2352|root, fd00:1:1:1:250:56ff:febb:25b3|root, fd00:1:1:1:250:56ff:febb:90dc|root,
fd00:1:1:1:250:56ff:febb:3025|root, fd00:1:1:1:250:56ff:febb:d659|root
vip-command: sudo ifconfig ens160:2 fd00:1:1:1:250:56ff:febb:25b4 netmask 255.255.255.0 up
dns-server-ip: ''
schedule-duration: '10'
dns-tsig-key-name: ''
current-master-host: fd00:1:1:1:250:56ff:febb:25b3:8080
observer-ssh-username: root
```

1. Configure config-db-host with Master Server IP and Slave Server IPs: fd00:1:1:1:250:56ff:febb:25b3, fd00:1:1:1:250:56ff:febb:90dc.
2. Configure report-db-host with master data node IP and slave data node IP: fd00:1:1:1:250:56ff:febb:b4ca, fd00:1:1:1:250:56ff:febb:2352
3. Configure current-observer-host with observer's server IP: fd00:1:1:1:20c:29ff:feaa:a15b.
4. Configure current-master-host with master server IP and port number: fd00:1:1:1:250:56ff:febb:25b3:8080
5. Configure target-host with slave server IP and port number: fd00:1:1:1:250:56ff:febb:90dc:8080.
6. Configure Observer-ssh-username : root





7. Configure vip-ip : fd00:1:1:250:56ff:febb:25b4
8. configure vip-command: sudo ifconfig ens160:2 fd00:1:1:250:56ff:febb:25b4 netmask 255.255.255.0  
up
9. Configure ssh-username with all the connected server's IP and username :  
fd00:1:1:250:56ff:febb:b4ca|root,fd00:1:1:250:56ff:febb:2352|root,fd00:1:1:250:56ff:febb:25b3|root,fd00:1:1:250:56ff:febb:90dc|root,fd00:1:1:250:56ff:febb:3025|root,fd00:1:1:250:56ff:febb:d659|root

## nsq-conf.yml

Configure host with the master server's VIP: fd00:1:1:250:56ff:febb:25b4

```
root@ubuntu:/motadata/motadata/config# cat nsq-conf.yml
lookupd-port: '4160'
max-message-size: '10000000'
port: '4150'
message-timeout: '100000'
lookup-port: '4161'
host: '[fd00:1:1:250:56ff:febb:25b4]'
lookup-http-port: '4151'
message-queue-size: '20000'
```

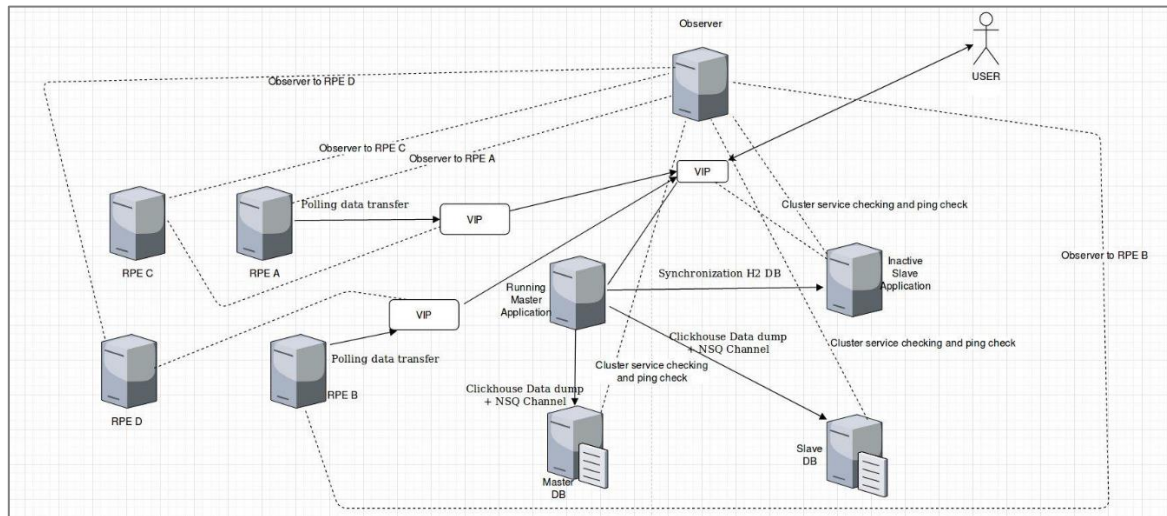
## 3. RPE-HA Configuration

### 3.1. IP Address

Master	fd00:1:1:250:56ff:febb:25b3
MasterRPE	fd00:1:1:250:56ff:febb:3025
DataNode	fd00:1:1:250:56ff:febb:b4ca
Observer	fd00:1:1:20c:29ff:feaa:a15b
Virtual IP	fd00:1:1:250:56ff:febb:25b4
SlaveMaster	fd00:1:1:250:56ff:febb:90dc
SlaveDataNode	fd00:1:1:250:56ff:febb:2352
SlaveRPE	fd00:1:1:250:56ff:febb:d659
VIP RPE1	fd00:1:1:250:56ff:febb:3026



## 3.2. Diagram



## 3.3. Active/Passive RPE Configuration

Please do the required configuration in the below mentioned configuration file:

- rpe-conf.yml

### Active RPE Configuration

```
root@master-server:/motadata/motadata/config# cat rpe-conf.yml
#https rpe master host
host: "[fd00:1:1:1:250:56ff:febb:25b4]"

#https rpe master server port
port: 443

#rpe client host
rpe-host: "[fd00:1:1:1:250:56ff:febb:3026]"

#reconnection time in seconds used to try for connection after disconnection from master server
reconnect-time: 30

#disconnection duration in hours, Must be between 1-24,default is 1
disconnect-duration: 1

#certificate file name, used to communicate between rpe master and client
certificate-file-name: keystore.jks

#used to consider rpe-client goes offline. value should be 1-60(minutes), default is 10.
rpe-status-duration: 10
```

1. Open /motadata/motadata/config/rpe-conf.yml file.
2. Configure host with Master Application VIP : fd00:1:1:1:250:56ff:febb:25b4
3. Configure rpe-host with VIP assigned to Active/Passive RPE : fd00:1:1:1:250:56ff:febb:3026
4. Configure rpe-physical-address with Active RPE server IP : fd00:1:1:1:250:56ff:febb:3025

## Passive RPE Configuration

```
root@rpe:/motadata/motadata/config# cat rpe-conf.yml
"rpe-version-no": "7.7.700"
"port": "443"
"disconnect-duration": "1"
"rpe-status-duration": "10"
"host": "[fd00:1:1:1:250:56ff:febb:25b4]"
"reconnect-time": "30"
"rpe-host": "[fd00:1:1:1:250:56ff:febb:3026]"
"rpe-physical-address": "[fd00:1:1:1:250:56ff:febb:d659]"
"certificate-file-name": "keystore.jks"
```

1. Open /motadata/motadata/config/rpe-conf.yml file.
2. Configure host with Master Application VIP: fd00:1:1:1:250:56ff:febb:25b4 (Master Application VIP)
3. Configure rpe-host with VIP assigned to Active/Passive RPE: fd00:1:1:1:250:56ff:febb:3026
4. Configure rpe-physical-address with slave RPE server IP: fd00:1:1:1:250:56ff:febb:d659

**Note:** Do the same configuration for multiple RPE's pair. Need to assign vip to active RPE's manually for the first time, before observer is started.

## 3.4. Master-Slave Server Configuration

Please do required configuration in below mention configuration file:

- motadata-conf.yml

```
# [0 = standalone, 1 = rpe master, 2 = rpe client]
# introduced new attribute to defined type of installation of motadata, default value is 0.
installation-type: 1

#provide the local motadata host address
motadata-host : localhost

#provide ssh port for local host connection
motadata-ssh-port: 22

availability-reachability: no

#python metric process depends on number of devices default is 2
motadata-python-metric-processes: 2

#python ping process depends on number of devices default is 1
motadata-python-ping-processes: 1

motadata-python-fault-metric-processes: 1
```

1. Open /motadata/motadata/config/motadata-conf.yml file.
2. Installation-type : 1



- rpe-conf.yml

```

root@master-server:/motadata/motadata/config# cat rpe-conf.yml
#https rpe master host
host: "[fd00:1:1:1:250:56ff:febb:25b4]"

#https rpe master server port
port: 443

#rpe client host
rpe-host: "[fd00:1:1:1:250:56ff:febb:3026]"

#reconnection time in seconds used to try for connection after disconnection from master server
reconnect-time: 30

#disconnection duration in hours, Must be between 1-24,default is 1
disconnect-duration: 1

#certificate file name, used to communicate between rpe master and client
certificate-file-name: keystore.jks

#used to consider rpe-client goes offline. value should be 1-60(minutes), default is 10.
rpe-status-duration: 10

```

1. Open /motadata/motadata/config/rpe-conf.yml file.
2. host: fd00:1:1:1:250:56ff:febb:25b4 (Master Application VIP)
3. rpe-host: fd00:1:1:1:250:56ff:febb:3026 (VIP of RPE)

**Note:** Do all the above same configuration in the slave server also.

### 3.5. Observer Server Configuration

Please do the required configuration in the below mentioned configuration file:

- observer-conf.yml
- rpe-conf.yml

#### Observer-conf.yml

```

root@ubuntu:/motadata/motadata/config# cat observer-conf.yml
vip-ip: fd00:1:1:1:250:56ff:febb:25b4
dns-server-type: ''
dns-zone: ''
dns-host: ''
dns-tsig-key-value: ''
dns-password: ''
report-db-host: fd00:1:1:1:250:56ff:febb:b4ca,fd00:1:1:1:250:56ff:febb:2352
current-observer-host: fd00:1:1:1:20c:29ff:feaa:a15b
reconnect-time: '60'
down-target-host: ''
log-retention-days: '2'
config-db-host: fd00:1:1:1:250:56ff:febb:25b3,fd00:1:1:1:250:56ff:febb:90dc
dns-time-to-live: '3600'
dns-timeout: '30'
ssh-port: '22'
target-host: fd00:1:1:1:250:56ff:febb:90dc:8080
rpe-target-host: ''
dns-tsig-key-algorithm: ''
dns-username: ''
rpe-observer-enable: enable
dns-switch-over: disable
dns-port: ''
ssh-username: fd00:1:1:1:250:56ff:febb:b4ca|root,fd00:1:1:1:250:56ff:febb:2352|root,fd00:1:1:1:250:56ff:febb:25b3|root,fd00:1:1:1:250:56ff:febb:90dc|root,fd00:1:1:1:250:56ff:febb:3025|root,fd00:1:1:1:250:56ff:febb:d659|root
vip-command: sudo ifconfig ens160:2 fd00:1:1:1:250:56ff:febb:25b4 netmask 255.255.255.0 up
dns-server-ip: ''
schedule-duration: '10'
dns-tsig-key-name: ''
current-master-host: fd00:1:1:1:250:56ff:febb:25b3:8080
observer-ssh-username: root

```

1. Open /motadata/motadata/config/observer-conf.yml file.
2. rpe-observer-enable: enable (Add this parameter for observing the RPE for failover)
3. vip-ip: fd00:1:1:1:250:56ff:febb:25b4
4. observer-ssh-username: root



## rpe-conf.yml

```
root@ubuntu:/motadata/motadata/config# cat rpe-conf.yml
dns-server-type: ''
rpe-host-vips: fd00:1:1:1:250:56ff:febb:3026
dns-username: ''
dns-zone: ''
max-rpe-ping-check-timeout: '3'
rpe-dns-host: ''
rpe-current-hosts: fd00:1:1:1:250:56ff:febb:3025-ens160
rpe-schedule-duration: '10'
dns-tsig-key-value: ''
dns-password: ''
reconnect-time: '30'
dns-port: ''
down-target-host: ''
dns-server-ip: ''
rpe-target-hosts: fd00:1:1:1:250:56ff:febb:d659-ens160
dns-tsig-key-name: ''
dns-time-to-live: '3600'
max-rpe-ping-check-retry-count: '3'
dns-timeout: '30'
current-master-host: fd00:1:1:1:250:56ff:febb:25b4
certificate-file-name: keystore.jks
dns-tsig-key-algorithm: ''
root@ubuntu:/motadata/motadata/config#
```

1. Open /motadata/motadata/config/rpe-conf.yml file.
2. rpe-host-vips: fd00:1:1:1:250:56ff:febb:3026 (VIP of pair of Active/Passive RPE )
3. rpe-target-hosts: fd00:1:1:1:250:56ff:febb:d659-ens160 (This field is for passive RPE)
4. max-rpe-ping-check-timeout: 3 (Default value is 3. Value less than 3 will not be counted)
5. rpe-current-hosts: fd00:1:1:1:250:56ff:febb:3025-ens160 (This field is for active RPE)
6. rpe-schedule-duration: 10 (the heartbeat check time, at this interval the observer will go for verifying services on rpe server)
7. reconnect-time: 30 (time for which the observer will wait , before switching over)
8. max-rpe-ping-check-retry-count: 3 (Default value is 3. Value less than 3 will not be counted)
9. current-master-host: fd00:1:1:1:250:56ff:febb:25b4 (Master Application VIP)

**Note:** In the Observer Server the sequence is required to be maintained in the rpe-conf.yml.



# CONNECT WITH US



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