

New Features for SALSA Runtime



WCL Group Meeting

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New Features

1. “netif” option support for theaters
2. Android support
 - Migration to android phones only
3. “extip” option support for AmazonEC2

1. “netif” option support -- Problem

- SALSA Theater listens to “127.0.1.1”

```
shigeru@shigeru-VirtualBox:~/Research/Salsa$ java wwc.messaging.Theater
Theater listening on: rmsp://127.0.1.1:4040/
```

- Not reachable from other hosts!!

```
shigeru@shigeru-VirtualBox:~/Research/Salsa$ cat /etc/hosts
127.0.0.1    localhost
→ 127.0.1.1    shigeru-VirtualBox
```

- Probably an ubuntu-specific problem

1. "netif" option support -- Solution

- Specify a network interface → released in SALSA 1.1.5

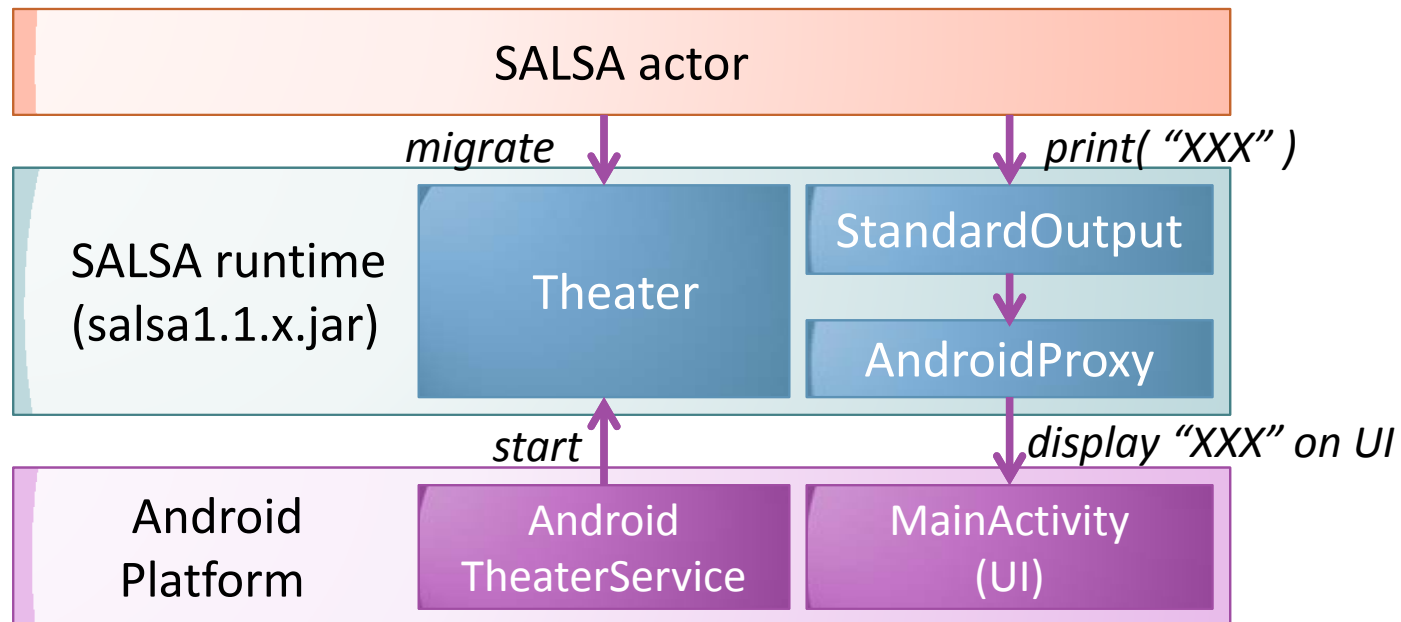
```
shigeru@shigeru-VirtualBox:~$ ifconfig
eth0      Link encap:Ethernet  HWaddr 08:00:27:62:c7:a8
          inet addr:10.0.2.15  Bcast:10.0.2.255  Mask:255.255.255.0
          inet6 addr: fe80::a00:27ff:fe62:c7a8/64 Scope:Link
          UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
          RX packets:22674 errors:0 dropped:0 overruns:0 frame:0
          TX packets:16983 errors:0 dropped:0 overruns:0 carrier:0
          collisions:0 txqueuelen:1000
          RX bytes:13793344 (13.7 MB)  TX bytes:1222397 (1.2 MB)
```

```
shigeru@shigeru-VirtualBox:~$ java -Dnetif="eth0" wwc.messaging.Theater
Theater listening on: rmsp://10.0.2.15:4040/
```

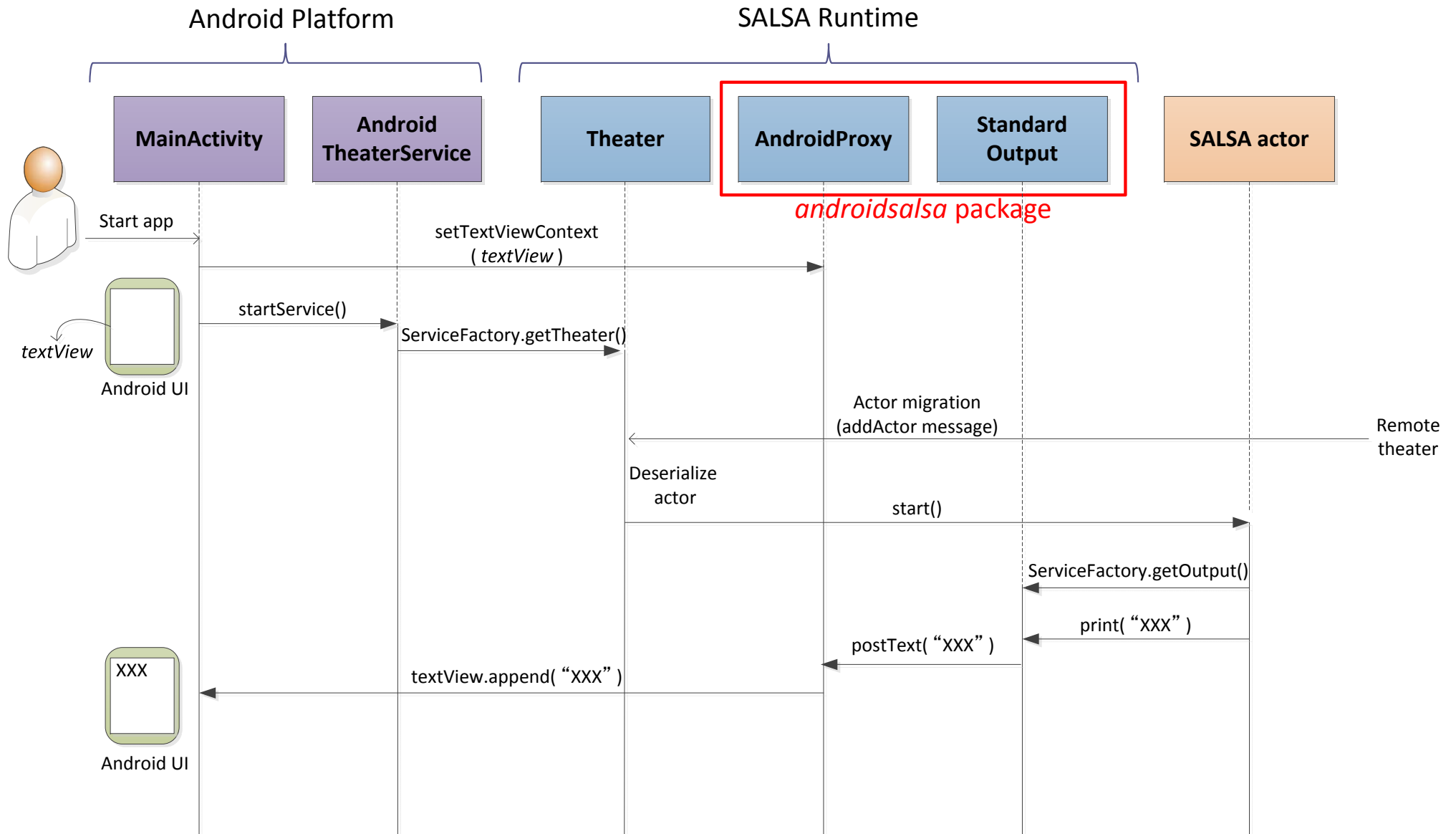
- Reachable from other hosts!!

2. Android Support -- Architecture

- To run a SALSA actor on Android, you need to:
 - Run a *Theater* as a service
 - Connect *StandardOutput* to Android UI

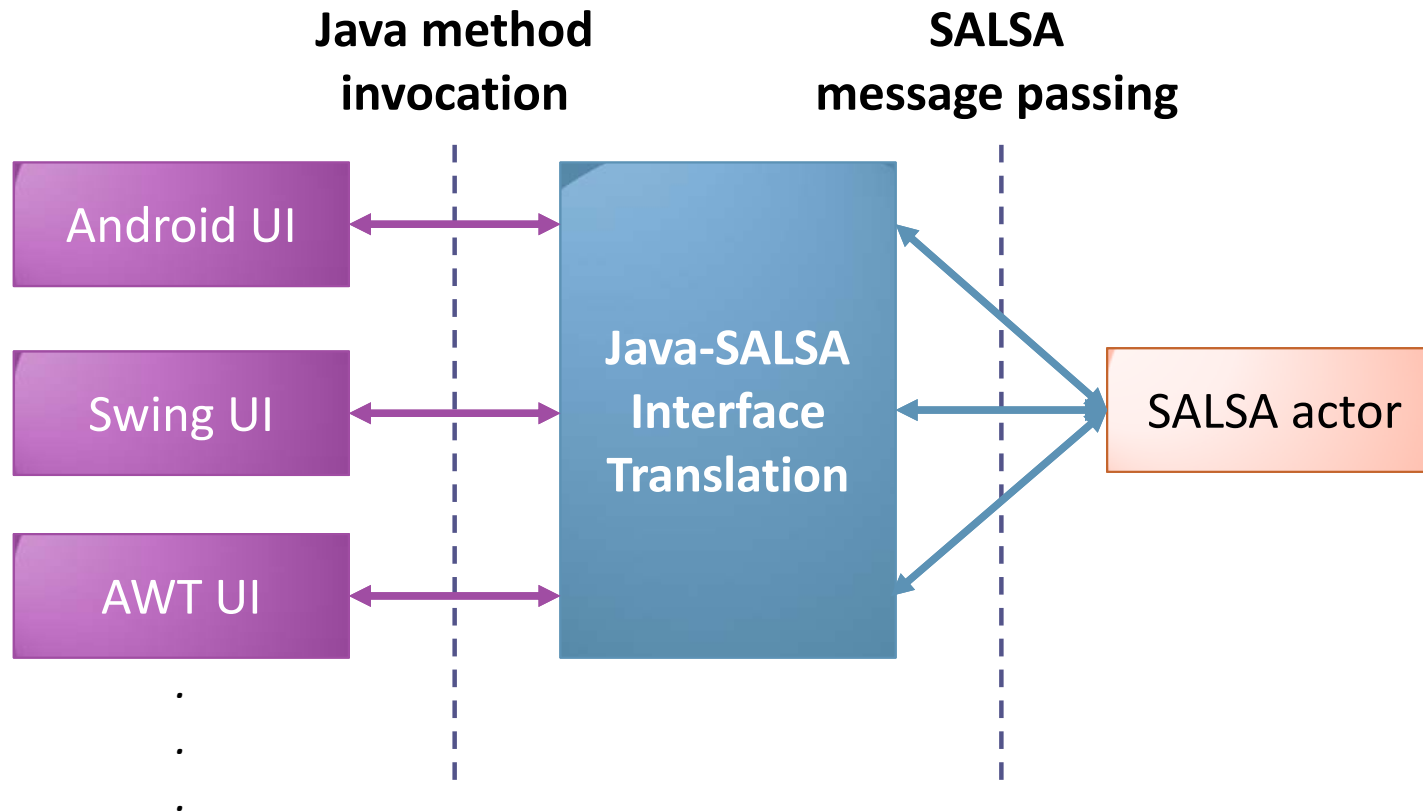


2. Android Support -- Sequence



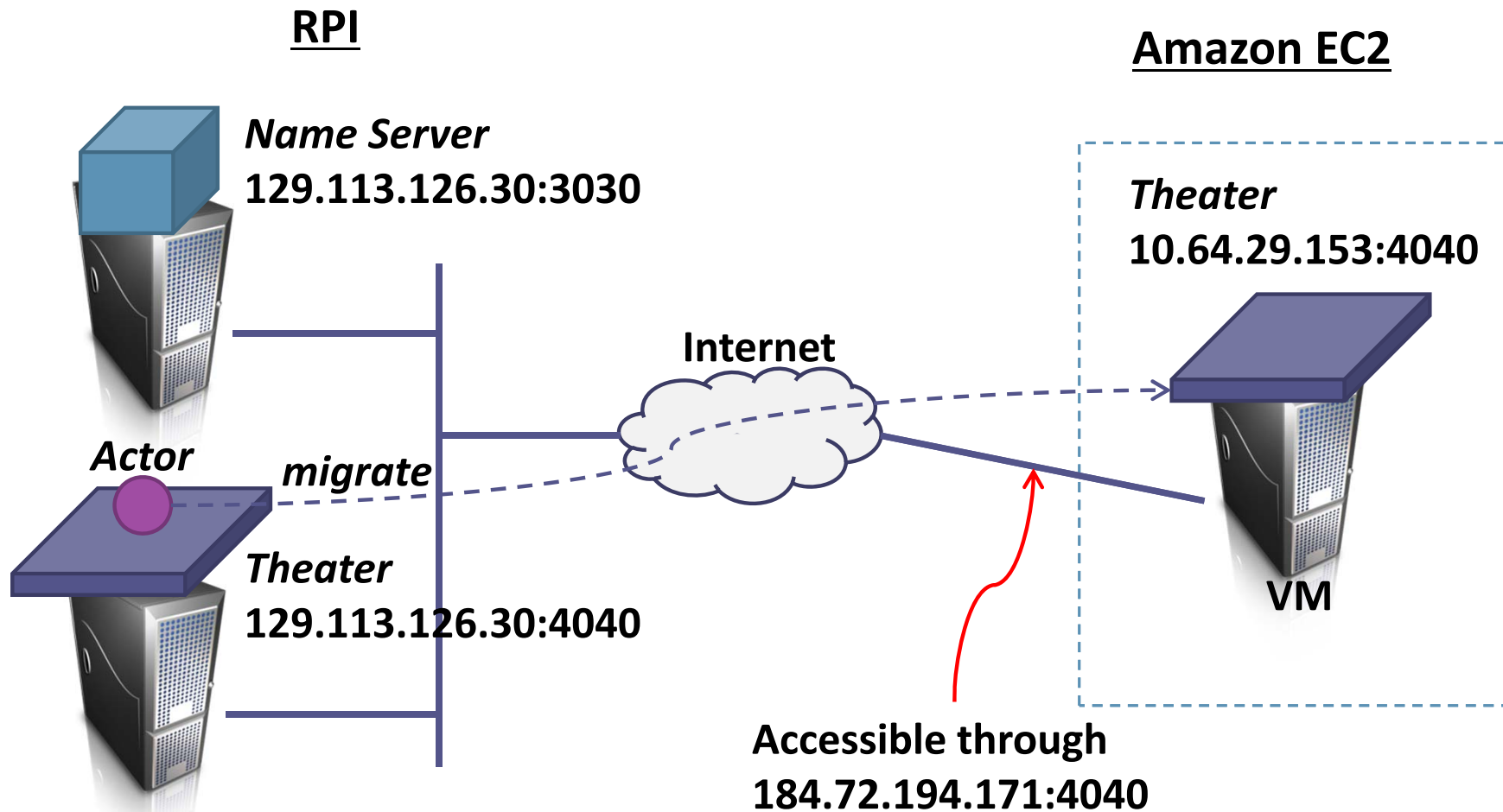
2. Android Support -- Discussion

- How should UI interacts with an actor ?



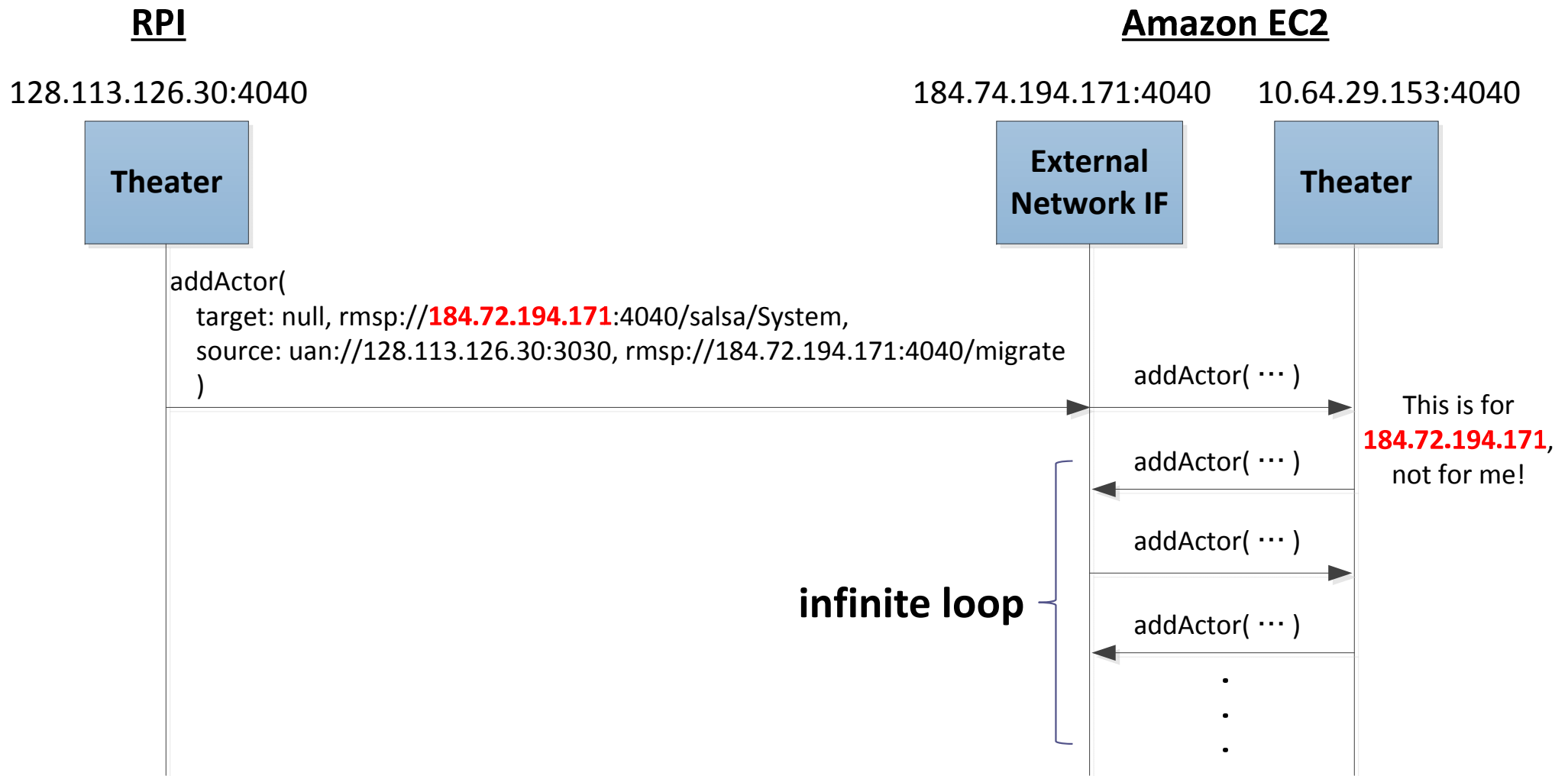
3. "extip" option support for AmazonEC2

- Task: Migrating an actor from RPI to Amazon VM



3. "extip" option support for AmazonEC2

- Problem



3. “extip” option support for AmazonEC2

- Solution: *extip* option
 - `java -Dextip=184.74.194.171 wwc.messaging.Theater`
 - Translate the IP address (*extip*) of an incoming message into a local address

`addActor(target: rmsp://184.74.194.171:4040/...)`

 translate

`addActor(target: rmsp://10.64.29.153:4040/...)`

3. "extip" option support for AmazonEC2

- Make sure RPI's firewall accepts incoming message for the nameserver and theater

