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”
  - Not reachable from other hosts!!
  - 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

![Diagram](image.png)
2. Android Support -- Sequence

Android Platform

- MainActivity
- Android TheaterService

SALSA Runtime

- Theater
- AndroidProxy
- Standard Output

- Androidsalsa package

Remote theater

Start app

TextView

Android UI

TextView.append(“XXX”)

ServiceFactory.getTheater()

setTextViewContext (textView)

startService()
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

```
addActor(
target: null, rmsp://184.72.194.171:4040/salsa/System,
```

This is for 184.72.194.171, not for me!
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/... )
```

```
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

![Diagram showing network connections between RPI, Name Server, Amazon EC2 Theater, and Actor.]

RPI

Name Server
129.113.126.30:3030

Internet

Amazon EC2

Theater
10.64.29.153:4040

Actor

VM

Theater
129.113.126.30:4040