

Asterisk+Java: Implementation of Callback Service

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Who we are? (Who am I?)

Consulting Java, JEE, Web Applications

Asterisk, VICIDial

Telecom, GOV, Insurance, Banks etc

Telus, MOH, Intact, SweesRE, BNS



Why Java with Asterisk?

Write once – Run everywhere

Sun (Oracle) supported

Already adopted by all kind of shops: Telus, Rogers
, Bell

Many frameworks, tools, IDEs - most are Open
Source

Easy to find graduates and seasonal professionals

You name it

No Asterisk-Smalltalk yet ;-)



Asterisk-Java Project

Asterisk-Java

The free Java library for Asterisk PBX integration.

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Asterisk-Java 1.0.0-m2 Released

On the way to the final 1.0.0 release

As most of the users already make use of many new features in 1.0.0-SNAPSHOT it is time to push the final release out of the door. As a first step I've released milestone 2 of 1.0.0 called 1.0.0-m2. Have a look at the [changelog](#) to see which bugs have been fixed and which new features are included.

Most notably milestone 2 includes support for the 1.6 series of Asterisk as well as support for [using scripting languages with the FastAGI server](#).

The new release is available as a plain jar and a zip distribution at <http://asterisk->

Documentation

[Tutorial](#), [FAQ](#)

[Latest development](#)

[0.3.1 \(latest stable\)](#)

[0.3](#)

[0.2](#)

Download

[1.0.0-SNAPSHOT](#)

[0.3.1 \(latest stable\)](#)

[0.3](#)

[0.2](#)

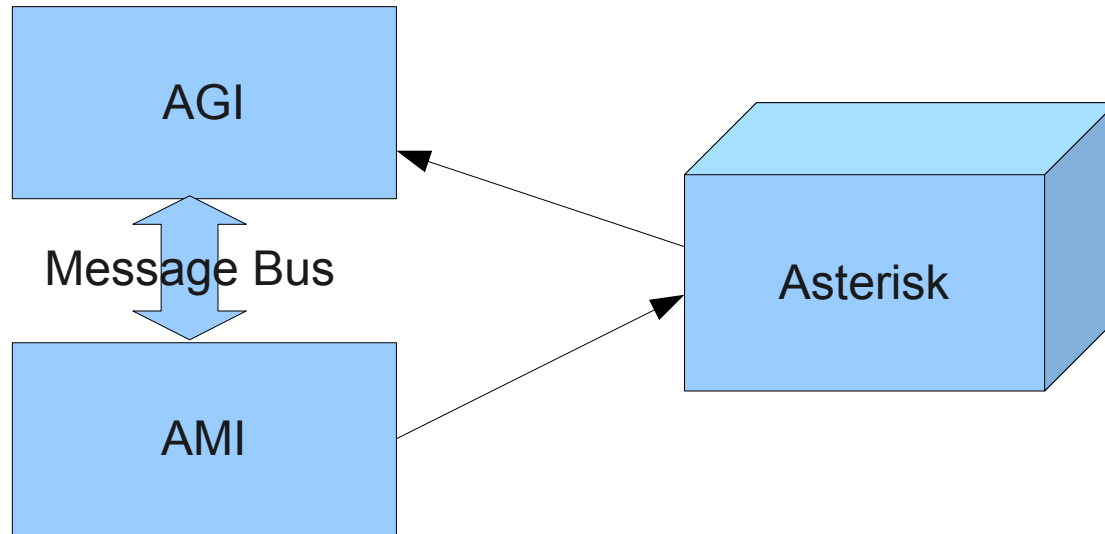
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<http://blogs.reucon.com/asterisk-java/>

Simple Application



AGI - use Java to create AGI scripts

AMI – Asterisk Manager Interface implementation to manage Calls, Queues, Peers Users, etc.



Simple AGI

```
public class HelloAgiScript extends BaseAgiScript
{
    public void service(AgiRequest request, AgiChannel channel)
        throws AgiException
    {
        // Answer the channel...
        answer();

        // ...say hello...
        streamFile("welcome");

        // ...and hangup.
        hangup();
    }
}
```

[default]

exten => 1300,1,Agi(agi://localhost/hello.agi)

```
$ ls -l
-rw-r--r--  1 srt srt 163689 2005-03-11 22:07 asterisk-java.jar
-rw-r--r--  1 srt srt    26 2005-03-11 20:50 fastagi-mapping.properties
-rw-r--r--  1 srt srt   624 2005-03-11 22:07 HelloAgiScript.class
```



Simple AMI

```
{  
.....  
    OriginateAction = new OriginateAction();  
    originateAction.setChannel("SIP/John");  
    originateAction.setContext("default");  
    originateAction.setExten("1300");  
    originateAction.setPriority(new Integer(1));  
    originateAction.setTimeout(new Integer(30000));  
    // connect to Asterisk and log in  
    managerConnection.login();  
    // send the originate action and wait for a maximum of 30  
seconds for Asterisk  
    // to send a reply  
    ManagerResponse originateResponse =  
managerConnection.sendAction(originateAction, 30000);  
    // print out whether the originate succeeded or not  
    System.out.println(originateResponse.getResponse());  
    // and finally log off and disconnect  
    managerConnection.logoff();  
.....  
}
```



AGI Channel

Call Controll, Database, Streams, Say..., Speech

AbstractAgiServer

AsteriskServer

LiveObject

ManagerConnection



Implementing Call Back

Traditional Call Back Use case :

User calls the “Access Number”

System Authenticates user and Authorize and Schedule
Callback

System hangup or continue ringing

User Hangs up

System initiate call to user and on answer gives prompts
how to complete the call

User dials the number or use “Send DTMF” feature of
the phone to send the number from “Contacts”



Implementing Call Back

Web Access use case

User logs in to web site

System finds and set the first leg parameters

User enters the number and clicks “Call”

System displays the Account Balance, etc.

System initiate call to user using first leg parameters

User picks up the Incoming call

System dial the second leg



Implementation Detail

Ringin Call Back

RinginCallBackAGI

CallBackHangupEventListener

CallBackManagerImpl

ChannelResolver

extensions.conf

asterisk-server-config.xml