

Advanced Call Progress Analysis with Asterisk

Asterisk Built-in Detection Options:

- `app_amd` – Answering Machine Detection
- `Waitforsilence` – Silence Detection
- `NVFaxDetect` – Fax Detection
- `NVMachineDetect` – Answering Machine Detection
- `NVBackgroundDetect` – DTMF, Answering Machine and Fax Detection while playing audio file

Limitations of Built-in Options

- Analysis happens as part of the call path
- Analysis requires extra time to work
- Only analyze for one thing at a time
- AMD 70-80% accuracy
- The “NV” apps can have some build issues on newer versions of Asterisk

Sangoma CPD

(Call Progress Detection)

- Algorithm based upon speech analysis methodology
- CPD server acts as a SIP proxy
- Need to patch Asterisk chan_sip to output messages in Asterisk Manager API
- Requires Windows server to run (Linux version in development)
- Licensed per concurrent channel

Sangoma CPD Benefits

- No added server load in Asterisk
- Analysis is parallel and transparent to the Asterisk call process
- Faster analysis time than built-in options
- Can analyze early media
- Up to 90-95% accuracy on AMD detection
- Answering Machine, Fax, Modem and Voice detection at the same time

Sangoma CDP output

- SIP/2.0 200 OK
- Via: SIP/2.0/UDP myvicidialbox:5060;branch=z9hG4bK49801c76;rport=5060
- Contact: "Paraxip NetBorder"<sip:NetBorder@callanalyzerIP:5060>
- To: <sip:customerphone@voipprovider;cpd=on>;tag=9d760064
- From: "V0423183024000821749"<sip:0000000000@myvicidialbox>;tag=as029393dd
- Call-ID: 15a056c75534941064612ead5c6c0a8c@myvicidialbox
- CSeq: 102 INVITE
- Allow: INVITE, ACK, CANCEL, OPTIONS, BYE, INFO
- Content-Type: application/sdp
- Content-Length: 261
- CPD-Result: Voice

Asterisk Integration

- Patch to chan_sip to take SIP messages and output the results to Manager API as Events
- ViciDial listens to the Manager API and stores the results for the calls in a database table
- If call is waiting for an agent or has just been answered and result comes back as Answering Machine, then it can be hung up on or sent to a pre-recorded message

Benefits to ViciDial Users

- Lowered Answered/Drop percentage, which is very important to USA FTC calling regulations
- Very fast AMD to lower the number of Answering machines sent to agents
- Reduced processing time compared to Asterisk AMD
- Reduced CPU load because the AMD process is taking place on another machine

For the Future...

- Linux version of NetBorder
- Additional detection options
- ViciDial-generated reports for output
- Option for redirection of Faxes to fax destination