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# Abacus 5000 IP Telephony Test System *Sip Load Test*

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## What does the Abacus 5000 do?

The system tests scalability, performance, interoperability, and voice quality for Voice, Video and Data over IP prior to and during deployment.



## Project Goals

- Create simple SIP loads using Abacus 5000 script file
- Configure Brekeke SIP proxy server as the SUT
- Create 3 different traffic loads and compare results
- Document physical and logical architecture
- Create User Manual

## Tasks and Milestones

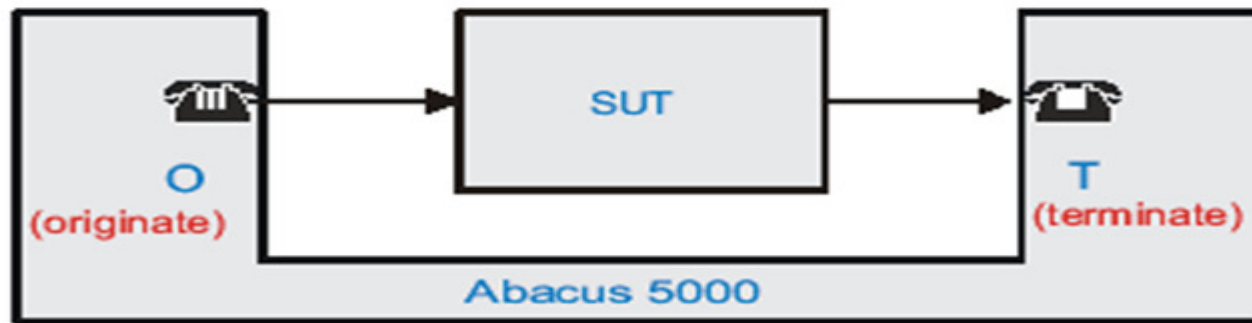
- Download and install Brekeke
- Interface Abacus Console, System Controller, and Brekeke
- Configure SIP loads to be tested
- Describe load results

## ICG3 CARD CAPABILITIES

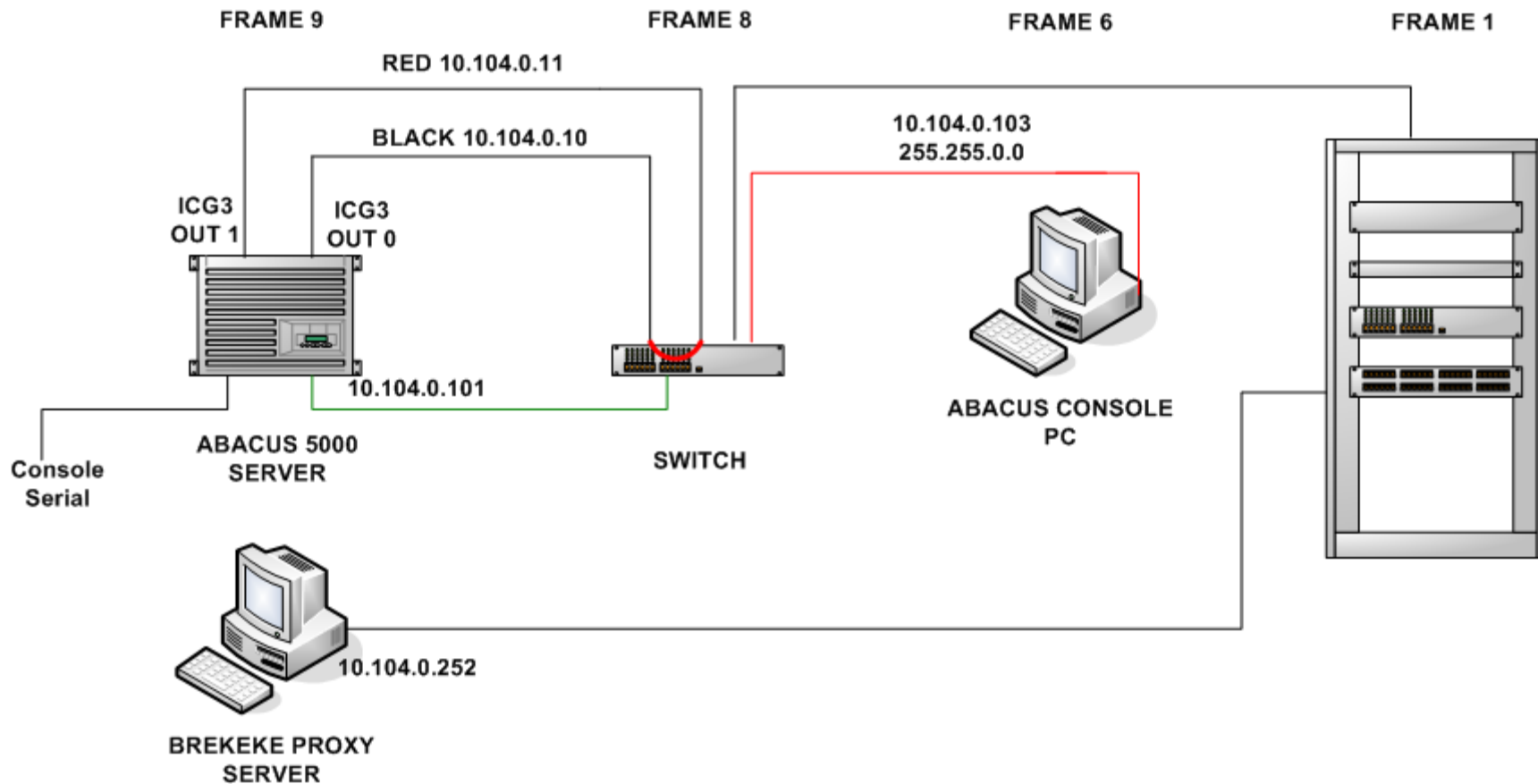
4,096 Endpoints for Signaling Traffic (No RTP Streams)	<b>Other Services Supported</b>
256 Endpoints for Voice Traffic	Transport Protocols: RTP/UDP/IPv4/RTCP
1,024 RTP-Only Channels (packet path confirmation)	Speech Codec: G.711 (u-Law or A-Law)
128 Voice Channels for PESQ	Speech Codec: G.729, G.723, G726, AMR, EVRC
256 Voice Channels for PSQM	Video Codes: H.261 and H.263 (encoding only)
128 Channels of IP Fax	SIP
	H.323
	MGCP
	MEGACO
	Clear Channel
<b>Does Not Support</b>	T.38 Fax
SIGTRAN	Call Progress Detection
Skinny Client Control Protocol	Path Confirmation

## Logical Architecture

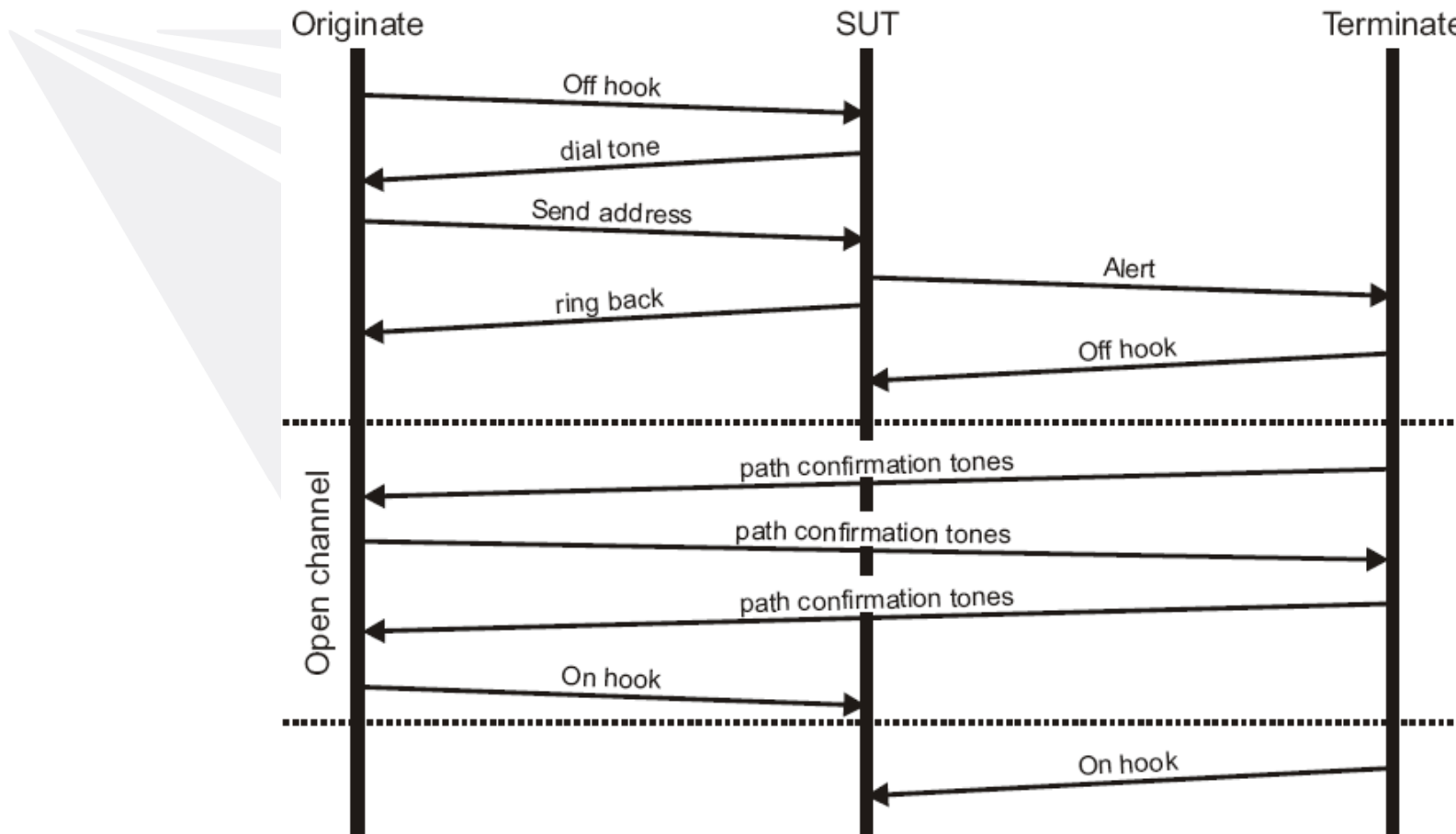
### Call Generation



# Physical Architecture VoIT



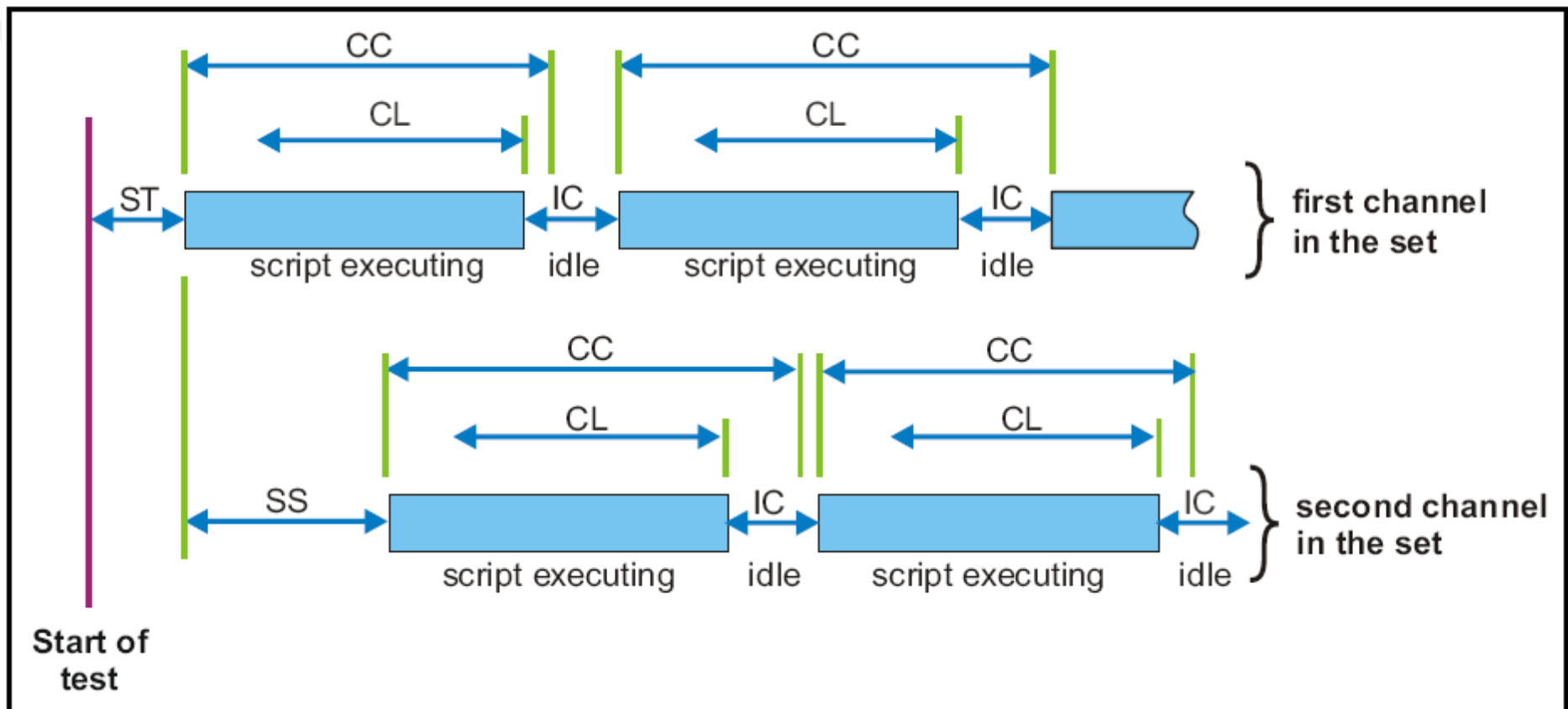
## Typical Call Sequence



## Timing Parameters

- Start Time (ST)
- Start-to-Start Time (SS)
- Call Length Time (CL)
- Inter-Call Time (IC)
- Call-to-Call Time (CC)

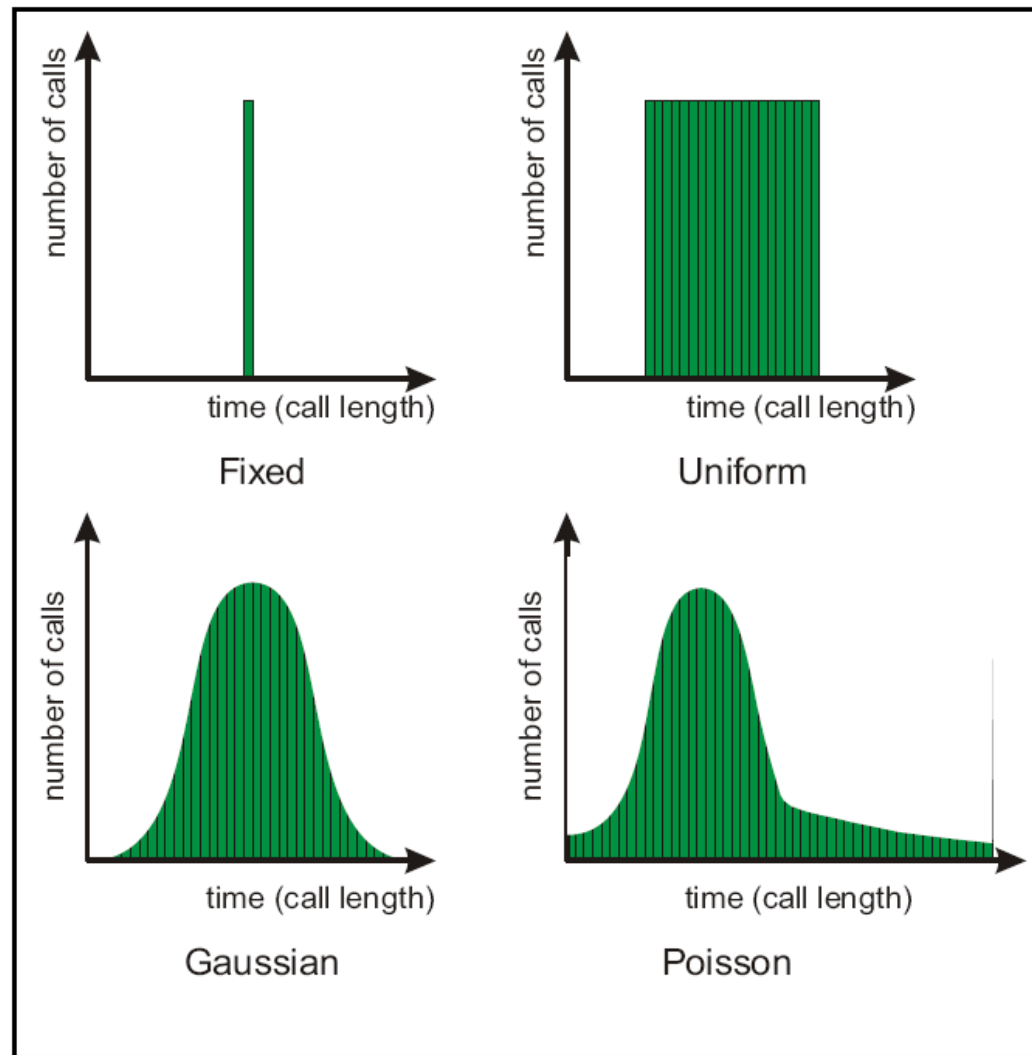
## Timing Parameters



## Test Loads

- High Volume short duration
- Steady volume fixed call length
- Variable call length
- Path confirmation/wave file QoM
- Gaussian/Poisson Uniform
- Scripts/actions

# Call Lengths



## Key Observations

*- Pros*

- Test scenarios virtually unlimited
- Numerous detailed reports

*- Cons*

- Heavily menu driven
- Steep learning curve

## Integration with VoIIT

- Any VoIP system within the lab can be interfaced with Abacus for testing.
- ◊ Patch panel at height 32 in frame 1 is connected to same port on patch panel at height 74 in frame 8.
- Frame 8 patch panel is connected to the switch at height 72.

Any questions or comments?

***DOES IT COME WITH A  
FIREWALL AND ANTIVIRUS  
PROTECTION?***



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