

Performance Evaluation of VoIP Protocols within Certain Number of Calls: Jitter

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Abstract: Background: Over the last few years, many multimedia conferencing and Voice over Internet Protocol (VoIP) applications have been developed due to the use of signaling protocols in providing video, audio and text chatting services between at least two participants. **Objective:** This study compared the two widely common signaling protocols, Inter-Asterisk eXchange Protocol (IAX) and the VoIP extension of the extensible messaging and presence protocol (Jingle) in terms of jitter during the media session. Both call setup and teardown sessions are out of this study. **Methodology:** Each one of the chosen protocols has its methods to exchange the data between the users, IAX uses its own header which is called mini header to carry the payload, whereas, the voice call is exchanged between two jingle participants over RTP header. **Results:** The NS2 has been used in order to test the performance for each protocol by finding the jitter value within certain number of calls varying from one to five calls. **Conclusion:** It can be noticed from the experiments that IAX protocol has improvement of performance over jingle protocol due to trunking property provided by IAX.