

Test Plan: IVR Call Flow Automation

1. Introduction

This test plan is designed to automate the testing of an Interactive Voice Response (IVR) call flow using SIPp and Linphone. The test will involve creating an SIP account with Linphone and executing the call flow using SIPp to validate the interaction sequence, including dialing, menu navigation, and listening to audio prompts.

2. Objectives

- Automate the process of dialing a specific phone number.
- Validate the playback of the welcome message.
- Simulate pressing option 1 (Lost and Found).
- Ensure that the correct announcement is heard.
- Confirm that the Music on Hold (MOH) is played after the announcement.

3. Test Scope

- ***In-Scope:***
 - Automation of dialing the phone number 6531050158.
 - Validation of audio prompts (welcome message, announcement, and MOH).
 - SIP signaling using SIPp.
 - Use of Linphone for SIP account management.
- ***Out-of-Scope:***
 - Load testing or performance testing of the IVR system.

4. Assumptions

- The IVR system is functioning and accessible via the SIP address.
- SIPp and Linphone are installed and configured on the testing machine.
- Necessary audio files (welcome message, option 1 selection, announcement, MOH) are available and correctly linked in the SIPp scenario file.

5. Test Environment

- **Tools:**
 - SIPp for sending SIP messages and simulating the call flow.
 - Linphone for managing SIP accounts.
- **Network:**
 - The testing machine should have access to the internet and be able to connect to sip.linphone.org.

6. Test Scenarios

- **Scenario 1: Dial IVR Number**
 - Objective: To initiate a call to [6531050158](tel:6531050158).
 - Expected Result: The call should be initiated, and the welcome message should be played.
- **Scenario 2: Press Option 1**
 - Objective: To simulate pressing option 1 on the IVR.
 - Expected Result: The IVR should recognize the input and play the corresponding announcement.
- **Scenario 3: Hear Announcement and MOH**
 - Objective: To validate that the announcement is played, followed by Music on Hold.
 - Expected Result: The correct announcement should be heard, and then the MOH should start.

7. Test Data

- **SIP Account:**
 - Username: [gopibarat](#)
 - SIP Address: [sip:gopibarat@192.168.0.120](#)
 - SIP Server: sip.linphone.org
- **Audio Files:**
 - [welcome_message.wav](#)

- `option1_selection.wav`
- `announcement.wav`
- `moh.wav`

8. Execution Steps

1. **Setup:**

- Create a SIP account on Linphone.
- Configure SIPp with the SIP account credentials.

2. **Execution:**

- Run the SIPp scenario to dial `6531050158`.
- Simulate pressing option 1 in the IVR.
- Validate the audio prompts.



3. **Verification:**

- Check logs and audio playback to ensure the IVR call flow behaves as expected.

10. Risks

- Incorrect SIP account configuration could result in failed calls.
- The IVR system might not respond correctly to SIP-based inputs.

12. References

- [Linphone SIP Account Setup](#)
- Introduction to SIPp:  [Learn SIPp part 1 - SIPp introduction and installation](#)
- Understanding SIPp workflow:  [Learn SIPp part 2 - Using UAS integrated scenario](#)
- [SIPp Scenario writing](#)