

Log Testing:

After testing with sign in with Miles Plus number, password, and two security questions none of these secrets were found in the logs from logcat.

Memory Testing:

Frida server running on target android emulator:

```
generic_x86_64:/ # chmod -R 775 /data/local/tmp/  
generic_x86_64:/ # ./data/local/tmp/frida-server-16.1.11-android-x86_64
```

Pid for united airlines app:

```
3123  United Airlines
```

After running fridump I opened strings.txt and found the following:

```
{  
  "answeredSecurityQuestions": [{  
    "answers": [{  
      "answerID": 0, "answerKey": "2c9VP8uK6VUJ1JR4Lmonwk3wy1UGEBg04VqUYjUqar6kU\u003dT679dhmVw95I3qNNZh1q3A\u003d\u003d", "answerText": "Action", "questionID": 0, "questionKey": "2c9VP8uK6VUJ1JR4Lmonwk3wy1UGEBg04VqUYjUqar6kU\u003dQZwGfJRPNI1NwgQWls5iUA\u003d\u003d", "questionText": "What is your favorite type of movie?", "used": false}, {  
        "answerID": 0, "answerKey": "2c9VP8uK6VUJ1JR4Lmonwk3wy1UGEBg04VqUYjUqar6kU\u003d3WwVYQUFQX6vFh1RD Ea\u003d\u003d", "answerText": "Blues", "questionID": 0, "questionKey": "2c9VP8uK6VUJ1JR4Lmonwk3wy1UGEBg04VqUYjUqar6kU\u003d15EVIw4fyu1wemfYpQnrqQ\u003d\u003d", "questionText": "What is your favorite type of music?", "used": false}], "customerID": "247800635", "hashValue": "", "mileagePlusNumber": "MDL91357", "rememberDevice": true, "sessionID": "F7+g0YCuMmtZ39Gx4n9DHBqdjeFonbofRatBFa6zmoaSR7NgvZBMyZaZ67wjr5J", "tFAMPDeviceSecurityPath": "ValidateTFASecurityQuestions", "accessCode": "ACCESSCODE", "application": {"id": 2, "isProduction": false, "name": "Android", "version": {"major": "4.1.102", "minor": "4.1.102"}}, "deviceId": "37f80a72-39d0-429e-9b2b-c57648b88dc5", "languageCode": "en-US", "transactionId": "37f80a72-39d0-429e-9b2b-c57648b88dc5", "pushToken": "37f80a72-39d0-429e-9b2b-c57648b88dc5|0e2fae40-c1fa-4fc4-b38b-1d4e045fa715"}  
07Yp
```

The answers for the security questions were found in plaintext.

The miles plus number used to sign in was also found in plaintext:

```
$BNEYLIQ8D6NQ0H4BWSU6XEAA NMKICFE0ETQ8.SBY9Y18QXYRQN0WE", "mileagePlusNumber": "MDL91357", "accessCode": "ACCESSCODE", "application": {"id": 2, "isProduction": false, "name": "Android", "version": {"major": "4.1.102", "minor": "4.1.102"}}, "deviceId": "37f80a72-39d0-429e-9b2b-c57648b88dc5", "languageCode": "en-US", "transactionId": "37f80a72-39d0-429e-9b2b-c57648b88dc5|b26607fd-5d8a-4f90-9061-2e6249b28fd6", "HASH": "$2A$11$BNEYLIQ8D6NQ0H4BWSU6XEAA NMKICFE0ETQ8.SBY9Y18QXYRQN0WE", "bucket": "dbsp", "documents": [], "isComplement": false, "mileagePlusAccountNumber": "MDL91357", "deviceId": "37f80a72-39d0-429e-9b2b-c57648b88dc5", "languageCode": "en-US", "pushToken": "37f80a72-39d0-429e-9b2b-c57648b88dc5|0e2fae40-c1fa-4fc4-b38b-1d4e045fa715"}  
07Yp
```

Fortunately no passwords were found in plaintext and are likely to be encrypted.