

# Salesforce Contact Validation using LinkedIn Sales Navigator for CRM

Sameer F  
Computer Science and Engineering  
RV College of Engineering  
Bangalore, India

Dr. Chethana R Murthy  
Computer Science and Engineering  
RV College of Engineering  
Bangalore, India

**Abstract:** Customer relationship management is a process in which a business or other organization administers its interactions with customers, typically using data analysis to study large amounts of information. Keeping the CRM contacts up-to date and in sync is an important task as it is the main pillar to any Customer Relation. This paper presents the use of the LinkedIn Sales Navigator for validating the out-of-sync contacts in CRM. LinkedIn Sales Navigator is a sales intelligence platform that enables virtual selling by allowing sales professionals to build and maintain relationships with their buyers at scale. This paper makes use of Selenium, Java, JSON, and automation to validate the Salesforce Contacts.

**Keywords:** Salesforce, LinkedIn sales navigator, CRM, Automation, Selenium

## I. INTRODUCTION

LinkedIn Sales Navigator is LinkedIn's flagship product for sales teams, enabling reps, managers, and ops leaders to inform their approaches and strategies by taking advantage of the full breadth of LinkedIn's expansive data, insight, and relationship-building tools. Sales Navigator is a sales intelligence platform that enables virtual selling by allowing sales professionals to build and maintain relationships with their buyers at scale. Sales Navigator is designed to be a centerpiece and fixture for modern B2B sales teams, integrating with other sales technologies (such as CRM) to provide a foundation of trusted, reliable, real-time data.

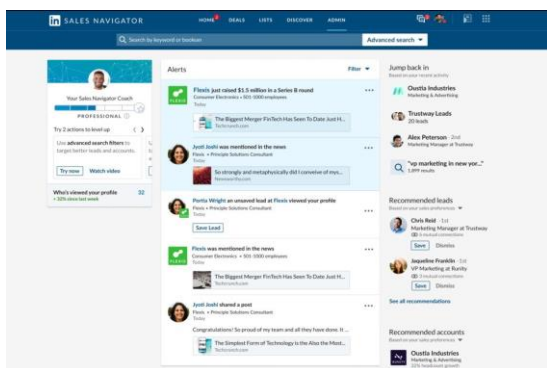


Figure 1: LinkedIn Sales Navigator

CRM (Customer Relationship Management) is a kind of software that stores customer contact information like name, address, age, phone number. It also keeps tracks of customer activity like website visits, numbers of outgoing and incoming phone calls, email, and more.

Salesforce is a cloud-based Customer Relationship Management (CRM) software for managing customer relationships and integration with other systems. This SaaS tool helps to create custom solutions for marketing, sales, services and ecommerce as per business requirements.

Test automation is the use of software separate from the software being tested to control the execution of tests and the comparison of actual outcomes with predicted outcomes.

Test automation can automate some repetitive but necessary tasks in a formalized testing process already in place or perform additional testing that would be difficult to do manually.

Selenium is a free (open-source) automated testing framework used to validate web applications across different browsers and platforms. You can use multiple programming languages like Java, C#, Python etc. to create Selenium Test Scripts.

JSON (JavaScript Object Notation) is a lightweight data-interchange format. It is easy for humans to read and write. It is easy for machines to parse and generate. JSON is an open standard file format that uses human-readable text to store and transmit data objects consisting of attribute-value pairs and arrays.

## 2. AIM

The aim of this paper is to validate contacts in Salesforce CRM using LinkedIn sales navigator to understand if contact is currently with the company or not. The contact validation doesn't have any value unless we understand where contact has moved to. Currently LinkedIn contact data validation feature is limited to only providing information about if contact is with company or not and doesn't provide details to contact's current details like Company Name, Address, Title etc.

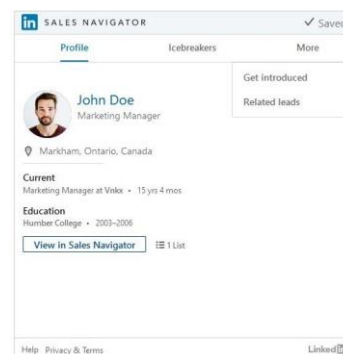


Figure 2: Sales Navigator – Contact Details

Sales Navigator helps to perform three of the most critical functions:

- **Target:** Quickly identify and learn about people and companies.
- **Understand:** Track key developments at target accounts, such as decision makers changing jobs or indicators of buying intent, to act on opportunities as they arise.
- **Engage:** Connect and converse with prospects within a ready-to-do-business environment while tapping into the full extent of LinkedIn’s messaging and content-sharing capabilities.

With the help of Sales Navigator, the contact’s current details like Company Name, Address, Title, Location and so on can be acquired and validated with CRM data which helps to sync the contacts and keep the CRM data up-to date.

### 3. RELATED WORK

In this section, we look into the automation part of Contact validation, the tools and programming language that can be used to automate Salesforce CRM and LinkedIn Sales Navigator are discussed.

In [1], the paper addresses the challenge of Automating the testing process for application landscape frameworks that is hard due to the complexity caused by the variety of customer application landscape configurations, used tools and platforms. Although the paper doesn’t cover wide range of application landmark frameworks.

In [2], author focuses to solve harder problems such as (1) what are start-up and tear-down activities of tests, (2) what are interesting test data, (3) what expected behavior to check in assertions. They use Meta-heuristic to find test inputs, Symbolic execution, TTCN-3 for test control. The paper doesn’t have practical implementation of the solution it provides.

[3] Paper compares Postman, JMeter, and Robot Framework and constructs a test and evaluation system based on different data environments. The paper uses PM model and page object model for developing the test scripts.

The aim of [4] is evaluation and comparison of Katalon Studio and Selenium, used for web application testing. They followed Page object model (POM). The drawback of this paper is paper doesn’t talk about test data automation.

[5] presents a description of automated software testing tools based on the type of the test and specifies which tools are the best and more efficient. The paper doesn’t conduct experiment to compare the different testing tools and paper lacks a practical demonstration of tools.

### 4. DESIGN

LinkedIn Sales Navigator has an integration with Salesforce which provides a capability known as Contact Data Validation. It compares the Contacts and their Account associations in CRM with LinkedIn Data and determines which of the contacts are outdated, i.e., they are associated to incorrect account. It populates a field LID\_\_No\_longer\_at\_Company\_\_c on CRM contacts which tells us if the contact has moved to a

new company. LinkedIn doesn’t have any APIs which will provide this information. Only way is to use the LinkedIn Widget on the Contact Layout, which pulls in the latest contact information from LinkedIn and shows what is their new company name and update contact manually in CRM. Doing this manually for 120k outdated contacts was not feasible so feasible option is to automate this process.

We have used Selenium with Java for automating the process of Contact Data validation.

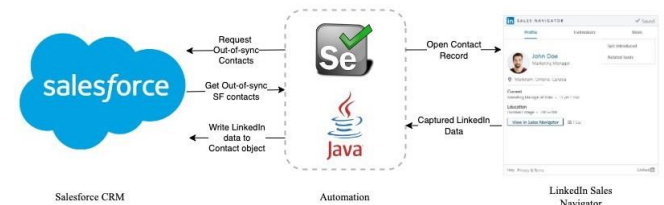


Figure 3: Flow Diagram

The steps in the automation process are as follows:

1. Query Salesforce for out of sync contacts
  - Establish connection with Salesforce CRM
  - Query the out-of-sync contacts
  - Get the CSV output and save it in disk.
2. Get the Contact details from LinkedIn Sales Navigator
  - Read the CSV using OpenCSV java library
  - Open the Contact’s record page
  - Capture LinkedIn data for the Contact
  - Write back the captured data to CSV
3. Update the CRM data
  - Read the CSV using OpenCSV java library
  - Create JSON objects of Contact details from CSV
  - Establish connection with Salesforce CRM
  - Update the data to CRM

### 5. RESULTS AND ANALYSIS

We successfully validated the out-of-sync CRM contacts using LinkedIn Sales Navigator. The LinkedIn Sales Navigator provided the contact details such as the current Company, position, Company location, tenure, industry and Company size. These contact details from Sales Navigator helped us for Contact validation.

Figure 4: CSV with Contact Details

```

{
  "attributes": {
    "type": "Contact"
  },
  "id": "SF_ID",
  "LID_New_Company_Name__c": "VnKx",
  "LID_New_Company_Position__c": "Marketing Manager",
  "LID_New_Company_Tenure__c": "15 yrs 4 mos",
  "LID_New_Company_Location__c": "Markham, Ontario, Canada",
  "LID_New_Company_Industry__c": "Internet",
  "LID_New_Company_Size__c": "1001-5000 employees"
}
    
```

Figure 5: JSON object

The Selenium automates the process of querying for the out-of-sync contacts, storing that data to CSV, opening the Contact's record in LinkedIn Sales Navigator and collecting data from Sales Navigator and writing that to the CSV. For the updating data on to CRM, a Selenium script reads all the data from CSV and creates JSOM objects for each contact and updates the contact data to CRM through API calls.

## 6. CONCLUSION

The Customer Relationship management plays a vital role in any organization. Keeping the CRM contacts up-to date and in sync is an important task. The paper proposes a way to validate the out-of-sync contacts of CRM using LinkedIn Sales Navigator. The validation process is automated using Selenium with Java.

The validation takes some time, as the automation script opens each contact's record in Sales Navigator and then collects the data, this time can be reduced by executing the automation script in parallel.

## 7. ACKNOWLEDGEMENT

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