

# Tableau for Salesforce

---

*Visualise data and generate insights with the  
leading platforms for data analytics*

---

**Damiana Spadafora**  
**Lars Malmqvist**



[www.bpbonline.com](http://www.bpbonline.com)

First Edition 2024

Copyright © BPB Publications, India

ISBN: 978-93-55519-245

*All Rights Reserved.* No part of this publication may be reproduced, distributed or transmitted in any form or by any means or stored in a database or retrieval system, without the prior written permission of the publisher with the exception to the program listings which may be entered, stored and executed in a computer system, but they can not be reproduced by the means of publication, photocopy, recording, or by any electronic and mechanical means.

### **LIMITS OF LIABILITY AND DISCLAIMER OF WARRANTY**

The information contained in this book is true to correct and the best of author's and publisher's knowledge. The author has made every effort to ensure the accuracy of these publications, but publisher cannot be held responsible for any loss or damage arising from any information in this book.

All trademarks referred to in the book are acknowledged as properties of their respective owners but BPB Publications cannot guarantee the accuracy of this information.

To View Complete  
BPB Publications Catalogue  
Scan the QR Code:



**Dedicated to**

*Our parents, who taught us the importance of  
working together, and to our Children, that  
they may learn it themselves*

---

## About the Authors

- **Damiana Spadafora** is a highly experienced and accomplished analytics professional with a strong background in driving Tableau rollouts at top-tier organizations. With a wealth of experience gained at Europe's top Tableau partner, the *Information Lab*, Damiana has a proven track record of successfully implementing Tableau solutions at organizations such as the *Financial Times*, *Schroder's*, and *Virgin Atlantic*.

Currently, Damiana serves as the Head of Financial Crime Data at a large Nordic bank, where she has been instrumental in driving analytics and Tableau usage across financial crime and compliance. Damiana is a well-established expert in data analytics, data management and data governance. She holds MSc degrees in Management and Economics as well as a postgraduate degree in data science. She is also a Tableau Certified professional.

- **Lars Malmqvist** has spent the past 13 years working as an architect and CTO within the Salesforce ecosystem. He has worked on over 40 Salesforce implementations, ranging from simple out-of-the-box scenarios to advanced, bespoke, multi-cloud solutions for large global brands. He is a 29-time certified Salesforce CTA with degrees in anthropology, mathematics, and technology management, an MBA from the University of Cambridge, and a Ph.D. in computer science from the University of York. Currently, he is a partner at *Implement Consulting Group*.

---

## About the Reviewers

- ❖ **Naresh Kumar Miryala** is a highly experienced engineering leader with nearly 20 years of industry experience and a strong background in cloud, platform engineering, and artificial intelligence. He has been leading high-performing cloud data platforms teams in his current role at *Meta Platforms, Inc.* He has a proven track record of cloud transformations, infrastructure implementation, database management, ERP solutions, and DevOps deployments. His expertise spans multiple domains such as database systems, large-scale backend infrastructure, security, multi-cloud deployments, cloud infrastructure, DevOps, and Artificial Intelligence.

Naresh has contributed to esteemed organizations such as Oracle Corp and Computer Sciences Corporations, where he played a pivotal role in migrating and implementing enterprise technologies for Fortune 500 companies across the globe. His impact spans various industries worldwide, including pharmaceuticals, retail, banking, and gold mining companies.

Naresh's experience in cloud migrations, particularly involving relational, open-source, and NoSQL databases, middleware, and applications, has granted him a comprehensive understanding of multi-faceted technical and business challenges in the modern world and developing innovative solutions across the industry to solve large-scale data transformation and security problems using Artificial Intelligence.

- ❖ **Santosh Chitalkar** is a seasoned Salesforce Technical Architect, currently working with *Cognizant*, with over 13 years of dedicated experience in the field. His expertise spans the spectrum of Salesforce implementation, Lightning Web Component (LWC) development, CRM analytics, and seamless integrations. Throughout his career, Santosh has demonstrated a keen ability to design and execute innovative solutions tailored to meet the unique needs of diverse clients. With a meticulous approach to problem-solving and a deep understanding of Salesforce's capabilities, he has consistently delivered transformative outcomes that drive business success. Santosh's passion for harnessing technology to empower organizations has earned him a reputation as a trusted advisor in the Salesforce ecosystem. His commitment to excellence and continuous learning underscores his status as a leader in the field of Salesforce architecture.

## Acknowledgement

There are a few people we would like to thank who helped make this book a reality. First and foremost, our families for being always supportive of our ambitions. Next, our children, their refusal to sleep has not made writing this book any faster, but their bright spark has given meaning to this and all our endeavours.

Our gratitude also goes to the team at BPB Publication for their infinite patience as we tried our best but still came short of meeting all our deadlines. We would also like to acknowledge the work of Santosh Chitalkar and Naresh Miryala whose kind input has made this work better in every way.

---

# Preface

Tableau is a powerful data visualization tool, and Salesforce CRM is the most successful customer relationship management software. Companies often use these two tools to analyze data and create visualizations. However, many barriers prevent them from working together. This book will teach you how to bridge Tableau and Salesforce CRM to deliver cutting-edge data analysis and visualization.

After reading this book, the reader will have the knowledge to start using both tools to analyze real-world CRM data and create CRM Analytical dashboards that generate value for their companies.

This book is divided into 10 chapters. It starts with an introduction to both Tableau and Salesforce CRM. It then goes on to show you how you can connect Tableau with Salesforce CRM to link the two tools. Then, it walks through some of the key features of this connection that allow for seamless data analysis and visualization. It then moves on to advanced use cases combining Salesforce and Tableau for advanced analytics and decision making. The details are listed below:

**Chapter 1: Introducing Salesforce and Tableau** – This chapter will provide an overview of the history and key features of Salesforce and Tableau, and explore the benefits of integrating the two tools for Customer Relationship Management (CRM) analytics.

**Chapter 2: Setting Up Salesforce with Tableau** – This chapter will provide a step-by-step guide on setting up a Salesforce org with CRM analytics and integrating it with Tableau.

**Chapter 3: Building and Integrating Data Pipelines** – This chapter will focus on different methods for connecting to data in Tableau as well as data cleaning and transformation capabilities.

**Chapter 4: Exploring Charts, Graphs, and Dashboards** – This chapter will provide guidance on creating simple visualizations of Salesforce CRM data in Tableau.

**Chapter 5: Extracting Deeper Insights with Funnels, Maps, and Hybrid Visualisations** – This chapter will delve deeper into the topic of Tableau visualizations. Intermediate-level visualizations like donut charts and funnels, which are particularly useful when analyzing CRM data, will be explained. Maps and Tableau geographical features will also be introduced.

**Chapter 6: Dealing with Complex Visualisations, Customisations, and APIs** – This chapter will deal with advanced visualisations that can be used to unlock deeper insight from CRM data. It will show the full extent of Tableau’s visualisations capabilities and the endless ways in which a chart can be customised.

**Chapter 7: Integration, Authentication, and Tableau Viz LWC** – This chapter will provide a comprehensive guide on integrating Tableau with Salesforce through the Tableau Viz LWC component.

**Chapter 8: Blending Tableau with Traditional CRM Analytics** – This chapter will introduce the concept of CRM Analytics and its importance in understanding and improving customer relationships.

**Chapter 9: Exploring Einstein AI and Advanced Analytics** – This chapter will focus on the concept of advanced analytics and its applications in Tableau and Salesforce. It will provide guidance on how to create a combined analytical use case across Tableau and Salesforce, leveraging the strengths of both platforms for enhanced data analysis and decision making.

**Chapter 10: Troubleshooting, Tricks, and Best Practices** – This chapter will summarize why Tableau and Salesforce are such a powerful combination, with an emphasis on their capabilities for data analysis, visualization and decision making. Additionally, it will provide tips on how to get started using Tableau and Salesforce, with guidance on best practices and useful resources. It will also contain guidance on troubleshooting common issues. Lastly, it will explain how to continue the learning journey, including recommended further reading.



---

## Tableau Files and Coloured Images

Please follow the link to download the *Tableau Files* and the *Coloured Images* of the book:

**<https://rebrand.ly/qp3z52n>**

The Tableau files for the book are hosted on GitHub at **<https://github.com/bpbpublications/Tableau-for-Salesforce>**.

In case there's an update to the files, it will be updated on the existing GitHub repository.

We have code bundles from our rich catalogue of books and videos available at **<https://github.com/bpbpublications>**. Check them out!

### Errata

We take immense pride in our work at BPB Publications and follow best practices to ensure the accuracy of our content to provide with an indulging reading experience to our subscribers. Our readers are our mirrors, and we use their inputs to reflect and improve upon human errors, if any, that may have occurred during the publishing processes involved. To let us maintain the quality and help us reach out to any readers who might be having difficulties due to any unforeseen errors, please write to us at :

**[errata@bpbonline.com](mailto:errata@bpbonline.com)**

Your support, suggestions and feedbacks are highly appreciated by the BPB Publications' Family.

Did you know that BPB offers eBook versions of every book published, with PDF and ePub files available? You can upgrade to the eBook version at [www.bpbonline.com](http://www.bpbonline.com) and as a print book customer, you are entitled to a discount on the eBook copy. Get in touch with us at :

**[business@bpbonline.com](mailto:business@bpbonline.com)** for more details.

At **[www.bpbonline.com](http://www.bpbonline.com)**, you can also read a collection of free technical articles, sign up for a range of free newsletters, and receive exclusive discounts and offers on BPB books and eBooks.

## Piracy

If you come across any illegal copies of our works in any form on the internet, we would be grateful if you would provide us with the location address or website name. Please contact us at **business@bpbonline.com** with a link to the material.

## If you are interested in becoming an author

If there is a topic that you have expertise in, and you are interested in either writing or contributing to a book, please visit **www.bpbonline.com**. We have worked with thousands of developers and tech professionals, just like you, to help them share their insights with the global tech community. You can make a general application, apply for a specific hot topic that we are recruiting an author for, or submit your own idea.

## Reviews

Please leave a review. Once you have read and used this book, why not leave a review on the site that you purchased it from? Potential readers can then see and use your unbiased opinion to make purchase decisions. We at BPB can understand what you think about our products, and our authors can see your feedback on their book. Thank you!

For more information about BPB, please visit **www.bpbonline.com**.

## Join our book's Discord space

Join the book's Discord Workspace for Latest updates, Offers, Tech happenings around the world, New Release and Sessions with the Authors:

<https://discord.bpbonline.com>



# Table of Contents

<b>1. Introducing Salesforce and Tableau.....</b>	<b>1</b>
Introduction .....	1
Structure .....	1
Objectives.....	2
History of Salesforce and Tableau.....	2
Defining Salesforce.....	5
Defining Tableau.....	7
Driving value with analytics.....	8
Need for CRM analytics .....	9
<i>Empowering users to make better decisions faster .....</i>	<i>9</i>
<i>Driving revenues and closing more deals .....</i>	<i>9</i>
<i>Gaining a deeper understanding of your customer .....</i>	<i>10</i>
Advantages of using Tableau and Salesforce together .....	10
<i>Unlocking Salesforce data with Tableau’s visualization capabilities .....</i>	<i>10</i>
<i>Empowering users by bringing Tableau dashboards into</i>	
<i>Salesforce CRM environments .....</i>	<i>11</i>
<i>Bringing Tableau dashboards to the next level with advanced insights from Einstein AI.....</i>	<i>11</i>
Conclusion.....	12
<b>2. Setting Up Salesforce with Tableau .....</b>	<b>13</b>
Introduction.....	13
Structure.....	13
Objectives.....	13
Setting up a Salesforce org with CRM Analytics .....	14
Setting up Tableau desktop.....	16
Getting started with Tableau Public .....	22
Conclusion.....	29
<b>3. Building and Integrating Data Pipelines .....</b>	<b>31</b>
Introduction .....	31
Structure.....	31
Objectives.....	32
Introduction to Tableau .....	32

---

<i>Connecting via Tableau Salesforce connector</i> .....	32
<i>Connecting to your Salesforce data in SQL</i> .....	36
<i>Data source screen in Tableau</i> .....	37
Basic data manipulations in the data screen .....	38
<i>Choosing between Live or Extract data</i> .....	42
<i>Bringing additional tables</i> .....	42
<i>Joins</i> .....	43
<i>Relationships</i> .....	45
<i>Joins versus relationships</i> .....	46
<i>Blends</i> .....	46
<i>Unions</i> .....	50
Conclusion .....	52
<b>4. Exploring Charts, Graphs, and Dashboards</b> .....	<b>53</b>
Introduction .....	53
Structure .....	53
Objectives .....	54
Fundamentals of creating visualizations in Tableau .....	54
<i>Using 'Show Me' menu and bar charts</i> .....	56
<i>Line charts in Tableau</i> .....	60
<i>Tables in Tableau</i> .....	64
<i>Pie charts in Tableau</i> .....	67
<i>Treemaps in Tableau</i> .....	75
<i>Scatterplots in Tableau</i> .....	77
Bringing all your insights together in a dashboard .....	83
Conclusion .....	92
<b>5. Extracting Deeper Insights with Funnels, Maps, and Hybrid Visualizations</b> .....	<b>93</b>
Introduction .....	93
Structure .....	93
Objectives .....	94
Introducing intermediate visualizations .....	94
<i>Donut charts</i> .....	94
<i>Filters and calculated fields</i> .....	106
<i>Bar-in-bar chart</i> .....	113
<i>Maps</i> .....	119

---

<i>Filled map</i> .....	123
Conclusion.....	124
<b>6. Dealing with Complex Visualizations, Customizations, and APIs .....</b>	<b>125</b>
Introduction.....	125
Structure.....	125
Objectives.....	126
Introducing advanced visualizations .....	126
<i>Pareto charts</i> .....	126
<i>Funnel charts</i> .....	136
<i>Advanced maps</i> .....	147
Using extensions in Tableau.....	162
Conclusion.....	163
<b>7. Integration, Authentication, and Tableau Viz LWC.....</b>	<b>165</b>
Introduction .....	165
Structure.....	165
Objectives.....	166
Installing the Tableau Viz LWC component.....	166
Configuring and using the Tableau Viz LWC component.....	168
Advanced use of the Tableau Viz LWC component .....	176
<i>Context filtering</i> .....	176
<i>Advanced filtering</i> .....	177
Setting up SSO between Salesforce and Tableau Online .....	180
Alternative methods to connect Salesforce and Tableau Dashboards .....	186
Conclusion.....	187
<b>8. Blending Tableau with Traditional CRM Analytics .....</b>	<b>189</b>
Introduction.....	189
Structure.....	189
Objectives.....	190
Introducing CRM Analytics .....	190
Creating Datasets, Lenses, and Dashboards in CRM Analytics .....	191
<i>Creating an analytics app</i> .....	192
<i>Importing a dataset</i> .....	194
Building a lens .....	197
<i>Making a dashboard</i> .....	202

---

Creating an Einstein Discovery Model and using it from CRM Analytics .....	207
Using the Tableau online output connection.....	212
Conclusion.....	218
<b>9. Exploring Einstein AI and Advanced Analytics.....</b>	<b>219</b>
Introduction.....	219
Structure.....	219
Objectives.....	220
Advanced analytics .....	220
<i>Real-world applications of advanced analytics</i> .....	221
Tableau: Advanced analytics capabilities .....	222
Salesforce: Advanced analytics capabilities.....	223
<i>Deeper dive in Einstein discovery</i> .....	223
Einstein prediction builder.....	224
<i>Other Einstein features</i> .....	226
Combining Salesforce and Tableau for Advanced Analytics .....	227
Conclusion.....	238
<b>10. Troubleshooting, Tricks, and Best Practices .....</b>	<b>239</b>
Introduction.....	239
Structure.....	239
Objectives.....	240
Tableau and Salesforce: a powerful combination .....	240
Using Tableau and Salesforce in practice.....	241
Troubleshooting guidance.....	242
<i>Connecting to Salesforce</i> .....	242
<i>Embedding Tableau dashboards in Salesforce</i> .....	243
<i>Using CRMA</i> .....	244
<i>Tableau dashboard</i> .....	245
Continuing the learning journey .....	247
Conclusion.....	248
<b>Index.....</b>	<b>249-252</b>

# CHAPTER 1

# Introducing Salesforce and Tableau

## Introduction

This chapter will provide an overview of the history and key features of Salesforce and Tableau, it will also explore the benefits of integrating the two tools for **Customer Relationship Management (CRM)** analytics. This chapter will begin by discussing the origins and evolution of Salesforce as a CRM platform and the emergence of Tableau as a leading data visualization and business intelligence tool. It will then delve into the specific functions and capabilities of each tool. Then, we will discuss why using analytics tools can provide businesses with a powerful and flexible solution for gaining insights from customer data and thereby driving business value. Finally, the chapter will explore the advantages of using Salesforce and Tableau specifically, such as the ability to make more informed decisions, improve customer satisfaction, and drive growth.

## Structure

The chapter covers the following topics:

- History of Salesforce and Tableau
- Defining Salesforce
- Defining Tableau
- Driving value with analytics

- Need for CRM analytics
- Advantages of using Tableau and Salesforce together

## Objectives

After completing this chapter, learners will be able to describe the history and evolution of Salesforce and Tableau as leading tools for CRM and data visualization respectively. They will learn how to explain the specific functions and capabilities of Salesforce and Tableau. The readers will know how to analyze the benefits of using analytics tools for gaining insights from customer data and driving business value. This chapters will help the readers evaluate the advantages of integrating Salesforce and Tableau for CRM analytics and identify ways in which using Salesforce and Tableau can lead to more informed decision-making, improved customer satisfaction, and business growth.

## History of Salesforce and Tableau

Salesforce is the world's top enterprise software company. Founded in 1999 by a group of former *Oracle* executives, Salesforce has been on a journey of growth and innovation. Due to its innovative **Software-as-a-Service (SaaS)** approach, all but unknown at the time, Salesforce quickly gained traction, and by 2002, it had amassed over 1,000 customers. Despite being affected by the dot-com bubble in the early 2000s, Salesforce continued to push through and saw its revenue skyrocket from \$5.4 million in 2001 to over \$100 million in 2003.

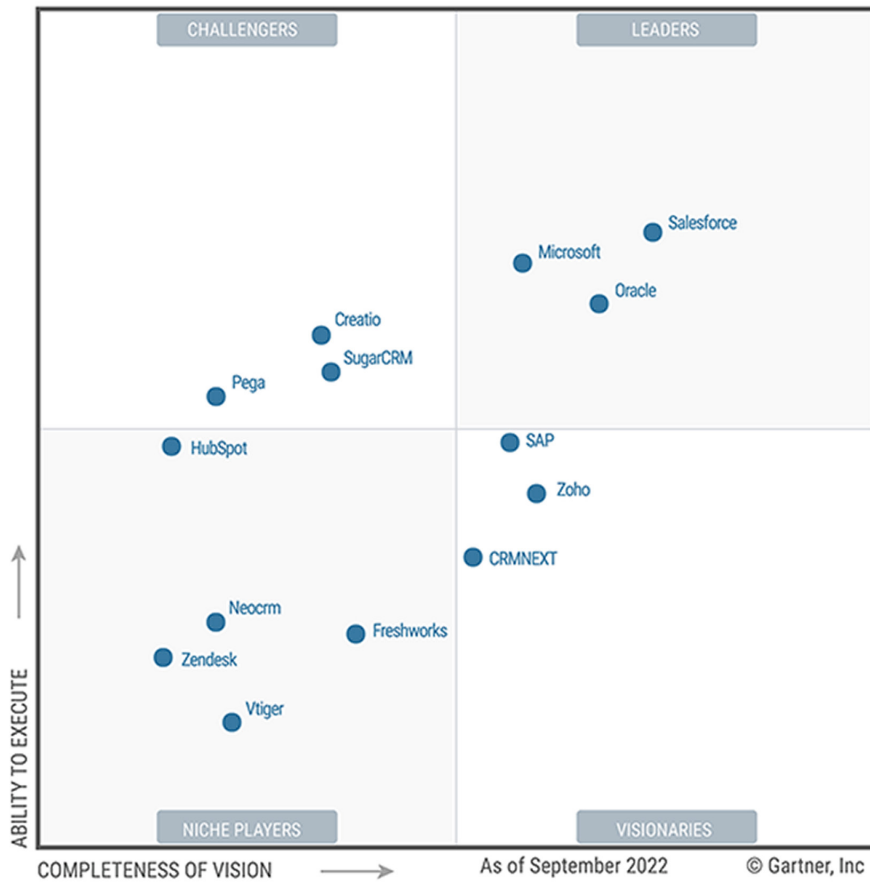
Salesforce initially focused on CRM applications and services but has since expanded its services to include a variety of cloud-based solutions. In 2005, Salesforce launched its AppExchange platform, allowing users to customize and share applications built on the Salesforce platform. This was followed by the introduction of Force.com, a **Platform-as-a-Service (PaaS)** offering that allowed customers to quickly create and deploy custom applications and, in 2009, *Service Cloud*, its first foray into areas outside the traditional Sales CRM space.

Over the years, Salesforce has continued to evolve and expand its offerings, launching new products in more than 20 different areas of enterprise software, such as marketing, digital commerce, integration, collaboration, AI, and industry clouds. It has also grown by acquiring companies like Heroku, MuleSoft, Slack, and, most importantly for this book, Tableau, the world-leading analytics platform.

According to research firm *Gartner*, Salesforce has held the top spot in their *Magic Quadrant for Sales Force Automation* for 16 years running, a testament to the company's ability to deliver on its vision and execute its strategy. Salesforce's CRM platform is used by a wide range of businesses, from small and medium-sized enterprises to large enterprise organizations. The following figure shows the Magical Quadrant for Sales Force automation.



Figure 1: Magic Quadrant for Sales Force Automation Platforms



Source: Gartner (September 2022)

Figure 1.1: Gartner Magic Quadrant for Sales Force Automation 2022

In addition to its dominance in the CRM space, Salesforce has also made strides in other areas of enterprise software. *Gartner* has placed Salesforce in the leader's quadrant in Magic Quadrants related to customer service, marketing automation, and digital commerce, recognizing the company's capabilities in broader digital transformation.

In terms of market share, Salesforce holds a significant portion of the CRM market, with industry analysts estimating that the company has a market share of around 23.8%, significantly larger than its closest competitors. Additionally, Salesforce has a growing presence in other areas of enterprise software, such as marketing automation, customer service, and e-commerce.

In 2022, Salesforce reported second-quarter earnings of \$7.72 billion, surpassing SAP to become the world's largest enterprise software vendor. Through all of these changes and challenges, Salesforce has remained committed to its mission of delivering a platform that helps companies connect with their customers in a whole new way.

Tableau started as a Ph.D. dissertation by *Chris Stolte* under *Professor Hanrahan*. This was the culmination of his six years of research work in the analysis of multidimensional data at Stanford. Nor was he a stranger to the world of visualization, as prior to Tableau, Chris had founded *BeeLine Systems*, a mapping and visualization software that would then be bought by *Vicinity Corporation*.

*Professor Pat Hanrahan* currently serves as a Professor of Computer Science and Electrical Engineering at *Stanford* and has been covering the field of visualization and computer graphics since the late 90s.

*Christian Chabot*, the company's third founder, who would go on to become Tableau's CEO and eventually its chairman, was in the dissertation room where Stolte discussed his research. This was not by chance, as Christian was BeeLine Systems' co-founder, together with *Chris Stolte*.

From this academic start came software that would be used by Fortune 500 companies and millions of people in the corporate and not-for-profit world, Tableau.

In 2013, Tableau went public with an IPO on the New York Stock Exchange, which raised more than \$250M. This 10-digit figure is perhaps not surprising when considering that as of 31 December 2012, Tableau could count on more than 10,000 customers and had achieved an 8-digit profit for the third year in a row.

Salesforce's 2019 acquisition of Tableau for \$15.7 billion was hailed as a highly strategic move for the company, and a significant step towards fulfilling its goal of providing a comprehensive, 360-degree view of the customer. With this purchase, Salesforce not only gained access to an enthusiastic data community but also acquired an enterprise-standard visualization tool. By integrating Tableau with its existing platform and technology, such as Einstein, the joint company is in a position to offer a powerful data stack for enterprises. The decision to acquire Tableau was made after Salesforce CEO *Marc Benioff* heard so much positive feedback from customers that he decided to OK the deal. The following figure shows the Magical Quadrant for Business Analytics Platforms.



Source: Gartner (February 2021)

*Figure 1.2: Gartner Magic Quadrant for Business Analytics Platforms 2021*

Tableau has continued to run as a separate business in many ways after the acquisition, but the products have been ever more tightly integrated. In 2022, Tableau celebrated 10 years as a Leader in the Gartner Magic Quadrant for Business Intelligence platforms.

## Defining Salesforce

We noted above that Salesforce has products in more than twenty different enterprise software areas. That means a comprehensive overview of all the functionality provided by the company would easily run to a book in its own right. However, a good way to familiarize ourselves with Salesforce is to look at the architecture of its core platform, called the **Lightning Platform**.

The lightning platform rests on a multi-tenant **Software-as-a-Service (SaaS)** platform that ensures high availability, scalability, and performance of the applications running on top.

The platform layer also handles database management, a compilation of custom code, and management of the metadata that represents the configuration of the unique customer environment. This figure shows an overview of the lightning platform.

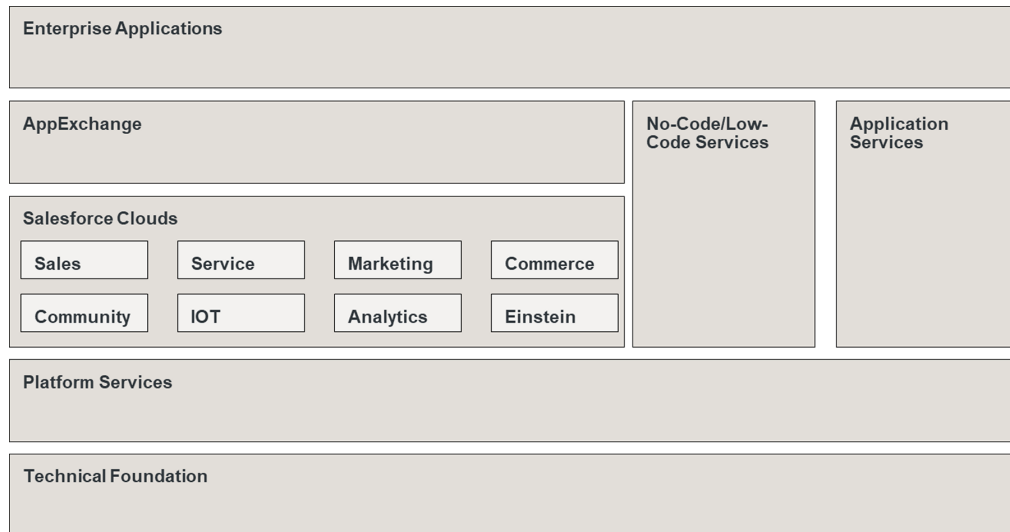


Figure 1.3: Lightning Platform Overview

The ability to customize almost everything via point-and-click tools is one of the strongest features in Salesforce and that ability is based on the fact that, everything is represented as metadata that is only compiled into a final application at runtime. The platform provides a range of core services that all applications make use of. These include security, internationalization, mobility, collaboration, and compliance. On top of these basic platform services, there are powerful building blocks that are used to assemble functionality into working applications.

First, there are tools to customize the data model. Within Salesforce you find both a standard data model with common objects and fields for instance to represent contacts or accounts. But you also have full flexibility to create a custom data model that meets your requirements.

Second, you have extensive automation capabilities that allow you to define custom processes and workflows. These can be triggered as part of business processes from the user interface or using scheduled data. They can use integrations to create cross-platform automation and increasingly incorporate AI to handle advanced processing.

Third, you have a large palette of no-code tools that you can use to customize the user experience. This includes for instance creating list views, pages, and page layouts, and branding the user experience to your company's identity.

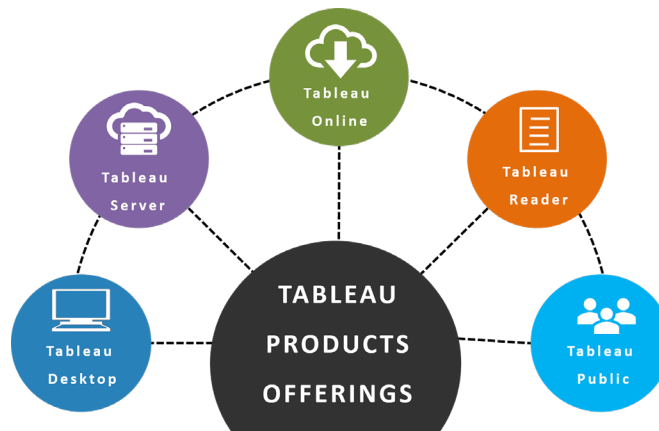
While the configuration of the data model, automation, and user experience gives you a lot of flexibility, sometimes you need to go even further.

By combining these capabilities, you can achieve a high level of unique functionality without having to invest in large amounts of custom code.

## Defining Tableau

The Tableau software ecosystem contains a number of different elements that together provide an unparalleled data analytics experience.

The following diagram shows the general overview:



*Figure 1.4: Tableau product overview*

*Tableau Desktop* is a drag-and-drop analytics and data visualization software that allows you to connect to a wide range of data sources, create ad hoc analyses, build cohesive dashboards, and share views with others.

*Tableau Public*, a free version of Tableau Desktop, is suitable for non-proprietary data analysis and allows users to connect to limited data sources like Microsoft Excel.

*Tableau Server* is a central repository managed by organizations that store all published workbooks, shared data sources, and/or Tableau Prep workflows.

*Tableau Online*, a hosted version of Tableau Server, has nearly all the same functionalities.

*Tableau Reader* is a free desktop application that enables users to view and interact with packaged workbooks from Tableau Desktop. Finally, Tableau Mobile is a free mobile app that allows users to view and interact with analyses published on Tableau Server or Tableau Online.

Finally, *Tableau Prep Builder* is a user-friendly data engineering software that enables you to connect to various data sources and clean, aggregate, pivot, and merge data before publishing it to a central repository for others to use. With *Tableau Prep Conductor*, an add-on in Tableau's Data Management, you can schedule and automate data engineering flows developed in Tableau Prep Builder.

In this book, we will focus mainly on Tableau Desktop to do the analysis of Salesforce data. However, we will also be getting acquainted with Tableau Prep, Tableau Server, and Tableau Online, particularly as we discuss some of the more advanced use cases for combining Salesforce and Tableau in the later chapters of the book.

## Driving value with analytics

*Analytics is the process of using data to make informed decisions, uncover hidden patterns and trends, and gain insights into a particular area of interest.* This process involves the collection, processing, analysis, and interpretation of data, using statistical and computational methods to identify and extract meaningful information.

Businesses use analytics to solve a wide range of problems, from optimizing processes and increasing efficiency to understanding customer behavior and improving marketing strategies. By leveraging data analytics, companies can gain a deeper understanding of their operations and customers, improve performance, and drive revenue growth.

One of the key benefits of analytics is that it can help businesses identify patterns and trends that would be difficult or impossible to detect manually. For example, a retailer may use data analytics to understand which products are selling well, what types of customers are buying those products, and how often they are making purchases. By analyzing this data, the retailer can adjust their inventory and pricing strategies to better meet customer demand and increase sales.

Another way that analytics can add value is by enabling businesses to optimize their operations and reduce costs. For instance, a logistics company may use data analytics to track shipments, identify bottlenecks in the supply chain, and optimize delivery routes to minimize transportation costs. By using analytics to improve efficiency, the company can reduce operational expenses, increase profits, and improve customer satisfaction.

In addition to these benefits, analytics can also be used to improve customer engagement and retention. For example, a media company may use data analytics to understand which types of content resonate with their audience and use this information to create more targeted and engaging content. By using analytics to better understand their customers' preferences, the company can increase engagement, attract new subscribers, and increase advertising revenue.

One important point to note is that data analytics is not just a tool for large enterprises. Small and medium-sized businesses can also benefit from analytics by using data to gain insights into their operations and customer behavior. For example, a local coffee shop may use data analytics to track sales, identify popular menu items, and understand which marketing channels are most effective at driving foot traffic. By using analytics to better understand their customers' preferences, the coffee shop can increase sales, reduce waste, and improve customer loyalty.

Overall, analytics is a powerful tool that businesses can use to drive insights and value. By leveraging data to identify patterns and trends, optimize operations, and improve customer engagement, companies can make more informed decisions and drive revenue growth. Whether you are a small business or a large enterprise, analytics can help you gain a competitive edge in your industry and achieve your business goals.

## Need for CRM analytics

**Customer Relationship Management (CRM)** analytics is a crucial tool for businesses looking to enhance their sales and customer service capabilities. It involves collecting and analyzing data on customer interactions, preferences, behaviors, and demographics to develop insights that can be used to improve decision-making, drive revenue, and gain a deeper understanding of the customer. In the following sections, we will explore the benefits of CRM analytics for businesses, focusing on analytics for sales and service.

## Empowering users to make better decisions faster

One of the primary benefits of CRM analytics is that it empowers users to make better decisions faster. By leveraging data and analytics, businesses can gain a better understanding of their customers, identify trends, and develop insights that can be used to inform strategic decisions. This means that businesses can make more informed decisions about product development, marketing campaigns, sales strategies, and customer service initiatives.

For example, consider a retail business that wants to improve its customer experience. By analyzing customer data, the business may discover that customers are unhappy with the current checkout process. Armed with this insight, the business can implement changes to the checkout process, such as introducing new payment methods or redesigning the checkout flow, to improve customer satisfaction.

## Driving revenues and closing more deals

Another key benefit of CRM analytics is that it can drive revenues and help businesses close more deals. By analyzing customer data, businesses can identify potential sales opportunities and develop targeted sales and marketing campaigns to capitalize on them. This means that businesses can more effectively reach out to customers with the right message at the right time, increasing the chances of converting leads into sales.

For example, consider a business that sells software products. By analyzing customer data, the business may discover that a particular customer has been using a trial version of their software but has not yet made a purchase. The business can then use this insight to reach out to the customer with a targeted sales offer, such as a discount or a personalized demo, to encourage them to make a purchase.

## **Gaining a deeper understanding of your customer**

Finally, CRM analytics can help businesses gain a deeper understanding of their customers. By analyzing customer data, businesses can identify patterns and trends that can be used to develop insights into customer behavior, preferences, and needs. This means that businesses can better understand what their customers want and need and develop products and services that meet those needs.

For example, consider a healthcare provider that wants to improve the patient's experience. By analyzing patient data, the healthcare provider may discover that patients are unhappy with the current wait times for appointments. Armed with this insight, the healthcare provider can implement changes to the appointment scheduling process, such as introducing an online booking system or adding more staff, to improve patient satisfaction.

CRM analytics is a crucial tool for businesses looking to enhance their sales and customer service capabilities. By empowering users to make better decisions faster, driving revenues closing more deals, and gaining a deeper understanding of the customer, businesses can gain a competitive edge in today's market. By leveraging data and analytics, businesses can develop insights that can be used to inform strategic decisions, improve customer's experience, and drive business growth.

## **Advantages of using Tableau and Salesforce together**

The combination of Salesforce and Tableau creates a powerful analytics solution that offers numerous benefits to companies. This goes beyond the value of either solution on its own. In the following sections, we will explore how you can leverage the combined power of these world-leading platforms.

## **Unlocking Salesforce data with Tableau's visualization capabilities**

Tableau's visualization capabilities enable users to create rich and interactive visualizations that allow them to easily explore and analyze Salesforce data. This includes the ability to create detailed dashboards, and interactive reports, and even embed visualizations directly within Salesforce objects. The result is a more intuitive and user-friendly experience that makes it easier to extract insights and identify trends.

In addition to its advanced visualization capabilities, Tableau also allows companies to blend Salesforce data with other business data for increased visibility and a deeper understanding of their customers. This means that users can combine data from multiple



sources, including ERP systems, marketing automation platforms, and other business applications, to gain a more complete picture of their customers and operations.

By providing finance, operations, channel teams, and executives with secure, customized, and up-to-date views of their data, Tableau enables organizations to make data-driven decisions with ease. For example, a sales team could use Tableau to gain insights into customer behavior, including purchase history, preferences, and buying patterns. With this information, the team can identify potential sales opportunities, optimize their sales funnel, and increase revenue.

## **Empowering users by bringing Tableau dashboards into Salesforce CRM environments**

Integrating Tableau dashboards into Salesforce CRM environments can be a game-changer for businesses. It empowers users by providing them with powerful data visualization tools that enable them to spot trends and patterns that may have otherwise gone unnoticed. This integration allows users to work more efficiently and effectively, providing insights that help predict outcomes.

Tableau's Dashboard Starters for Salesforce is a valuable tool that allows companies to quickly create actionable data analysis. This feature provides users with pre-built dashboards that are specifically designed to provide insights into Salesforce data. The dashboard starters are customizable, allowing companies to tailor them to their specific needs, such as sales forecasting, customer service analytics, and marketing campaign analysis.

One of the key benefits of integrating Tableau dashboards into Salesforce CRM workflows is the seamless integration it provides. By integrating with Salesforce CRM workflows, users can view and analyze their data without having to leave the CRM platform. This means that users can make data-driven decisions in real time, providing them with a competitive advantage in the marketplace.

For example, consider a sales team that is looking to identify new sales opportunities. By integrating Tableau dashboards into Salesforce, the sales team can analyze data on customer behavior, preferences, and past purchases to identify potential sales opportunities. With Tableau's data visualization tools, the sales team can quickly identify patterns and trends, making it easier to develop targeted sales campaigns and close more deals.

## **Bringing Tableau dashboards to the next level with advanced insights from Einstein AI**

Salesforce's Einstein AI models can be easily set up with no coding necessary, allowing companies to connect analytics to the next action to take. With Data Cloud for Tableau, users can unlock their customer data and deliver actionable insights at scale. By natively

connecting to integrated, unified data from any source, including their Salesforce instance, Data Cloud for Tableau enables users to discover customer insights and make data-driven decisions.

Tableau's integration with Salesforce also includes **CRM Analytics (CRMA)**, a fully native analytics solution built on Salesforce's platform. CRMA combines Salesforce's sales, service, and marketing data with Tableau's data visualization capabilities to provide companies with comprehensive insights into their operations. With CRMA, companies can identify trends and predict outcomes, spot anomalies, and improve their customer experience.

In summary, the combination of Salesforce and Tableau unlocks customer data, empowers users to work more efficiently, and provides advanced insights through Einstein AI and Data Cloud for Tableau. Furthermore, Tableau CRM offers a fully native analytics solution built on Salesforce's platform, allowing companies to achieve comprehensive insights into their operations. By leveraging Tableau's data visualization capabilities and Salesforce's extensive customer data, companies can make data-driven decisions and improve their overall performance.

## Conclusion

This chapter has provided an overview of Salesforce and Tableau and explored the benefits of integrating these two powerful tools for CRM analytics. We discussed the origins and evolution of Salesforce and Tableau, as well as the specific functions and capabilities of each tool. By using analytics tools, businesses can gain insights from customer data and drive business value.

We also discussed the advantages of using Salesforce and Tableau specifically, including the ability to make more informed decisions, improve customer satisfaction, and drive growth. By mastering the topics covered in this chapter, you should now have a better understanding of, how Salesforce and Tableau can be used together to gain insights that will help them make better business decisions and drive success.

In our next chapter, we will move on to discuss how to set up the software and tools needed for the rest of the book.

## Join our book's Discord space

Join the book's Discord Workspace for Latest updates, Offers, Tech happenings around the world, New Release and Sessions with the Authors:

<https://discord.bpbonline.com>



# CHAPTER 2

# Setting Up Salesforce with Tableau

## Introduction

This chapter will provide a step-by-step guide on setting up a Salesforce org with **Customer Relationship Management (CRM)** analytics integrating it with Tableau, and highlighting the key features and configuration options for enabling CRM analytics. Next, we are going to cover the steps for setting up Tableau Desktop and Tableau Online, including installing the software and creating an account.

## Structure

This chapter covers the following topics:

- Setting up a Salesforce org with CRM Analytics
- Setting up Tableau Desktop
- Getting started with Tableau Public

## Objectives

By the end of this chapter, learners will have gained a comprehensive understanding of how to set up a Salesforce organization, including its primary features and configuration options tailored for CRM analytics. Additionally, they will become familiar with the

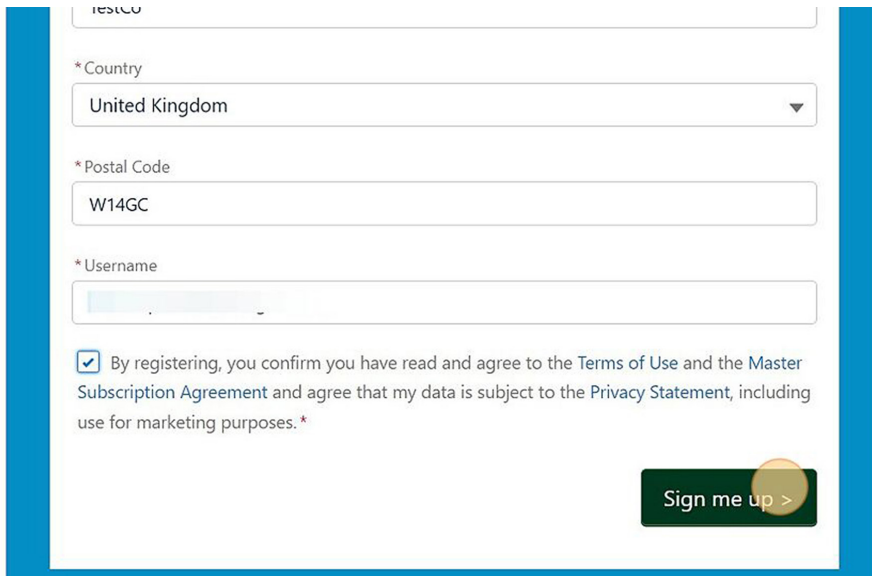
procedures to establish Tableau Desktop and Tableau Online, encompassing both the software installation and the process of account creation. Moreover, the chapter offers insights on how to configure Tableau Public for complimentary access to Tableau tools. Armed with this knowledge, readers will be well-prepared to delve into the connection between Salesforce and Tableau in the upcoming chapter.

## Setting up a Salesforce org with CRM Analytics

The first thing you will need to set up to follow the examples in this book is an Analytics enabled Salesforce Org. This differs from a regular Salesforce Developer Org by having CRMA enabled out of the box, along with data you can explore to learn its functionality. We will be using this environment throughout the following chapters.

To create a new Salesforce Analytics Enabled Developer org, follow these steps:

1. Navigate to [developer.salesforce.com/promotions/orgs/analytics-de](https://developer.salesforce.com/promotions/orgs/analytics-de). This will take you to the sign-up form:
2. Fill in the required fields in the form and click **Sign me up >**, as can be seen in the following figure. This will initiate the process of provisioning an org.

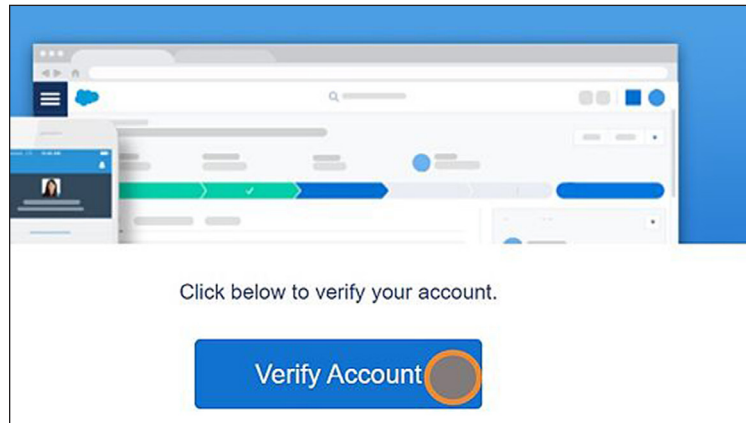


The image shows a sign-up form for a Salesforce Analytics Enabled Developer Org. The form is set against a white background with blue vertical bars on the left and right sides. The fields are as follows:

- A text input field at the top, partially filled with "testco".
- A dropdown menu for "Country" with "United Kingdom" selected.
- A text input field for "Postal Code" containing "W14GC".
- A text input field for "Username" which is currently empty.
- A checkbox that is checked, with the text: "By registering, you confirm you have read and agree to the Terms of Use and the Master Subscription Agreement and agree that my data is subject to the Privacy Statement, including use for marketing purposes.\*"
- A dark green button with a gold circle icon and the text "Sign me up >" at the bottom right.

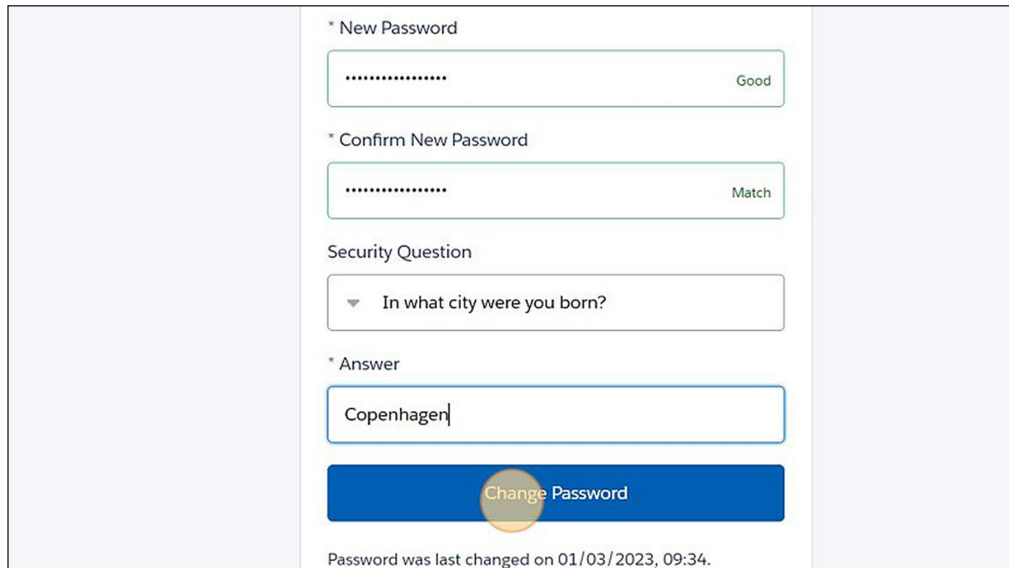
*Figure 2.1: Filled in Sign-up form*

3. You will now receive an email telling you the org has been created. This can sometimes take a few minutes. Click the button in the email to verify your account, as shown in the following figure:



*Figure 2.2: Verify account*

4. Enter the password you want to use for your new org and your security question and answer. Click **Change Password** to save and finish the provisioning process, as shown in *Figure 2.3*:

A screenshot of a password change form. The form contains the following fields and elements:

- \* New Password: A text input field with a strength indicator "Good".
- \* Confirm New Password: A text input field with a strength indicator "Match".
- Security Question: A dropdown menu with the selected option "In what city were you born?".
- \* Answer: A text input field containing the text "Copenhagen".
- A large blue button with the text "Change Password" and a circular icon.
- At the bottom, a timestamp: "Password was last changed on 01/03/2023, 09:34."

*Figure 2.3: Change password*