Enhancing Sales Team Performance through Real-Time, Personalized Insights Delivered via Email and Text Messages

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Abstract

In today’s fast-paced business environment, the abundance of data is both a boon and a challenge for companies. The sheer volume of information generated internally and acquired from vendors is immense, and technologies like Tableau have revolutionized data analytics and visualizations. However, the key to success lies in delivering the right information to the sales team promptly, enabling them to make informed decisions in real time. This article explores how harnessing Tableau subscriptions, user filters, and machine learning-driven recommendations can efficiently provide real-time, personalized insights directly to sales teams via email and phone. The goal is to transform the conventional approach, where end-users actively seek out information, into a proactive model where insights are delivered seamlessly, optimizing the efficiency of the sales team. The traditional paradigm often sees sales professionals spending valuable time searching for relevant insights instead of focusing on selling. By proactively delivering hidden trends and actionable insights, businesses can enhance the productivity of their sales teams, allowing them to allocate more time to revenue-generating activities. One of the key features of this approach is its emphasis on user-friendly tools like Tableau, demonstrating that Next Best Action can be seamlessly integrated within the Tableau ecosystem without the need for additional tools such as CRM systems. This not only streamlines the workflow for sales teams but also highlights the versatility and power of Tableau as an all-encompassing analytics platform. Furthermore, the solution presented in this article leverages the convenience of delivering insights directly to sales representatives through email and text messages. This eliminates the need for complex system logins, making the process more accessible and user-friendly. By providing insights directly to the fingertips of sales teams, this approach ensures that critical information is readily available, facilitating quick decision-making and boosting overall engagement.

Introduction

As the pharmaceutical and healthcare industries continue to evolve at a rapid pace, the adoption of innovative solutions becomes imperative for organizations aiming to maintain a competitive edge. In this dynamic landscape of healthcare and pharma sales, the ability to engage with healthcare professionals (HCPs) in a targeted and timely manner is crucial for driving business success.

Traditionally, sales representatives in these industries have grappled with the challenge of identifying and prioritizing the most relevant HCPs within their territories. This task has often involved navigating through cumbersome dashboards and conducting extensive data analysis. The sheer volume and complexity of data, encompassing prescription patterns, historical interactions, and individual HCP preferences, have made it increasingly difficult to efficiently allocate sales resources and target the right professionals effectively. Consequently, delays, missed opportunities, and suboptimal resource allocation have been common pitfalls in the traditional sales approach.

However, a paradigm shift is underway, propelled by advancements in technology and analytics. Emerging solutions leverage the power of Tableau subscriptions in conjunction with advanced analytics to provide sales
teams with personalized, real-time insights directly to their preferred communication channels, such as email or text messages.

Today’s technological processes, including advanced analytics engines and AI-driven models, operate behind the scenes, analyzing diverse data sources such as historical data, prescription trends, engagement history, upcoming product launches, expiring patents, and recent medical publications. These processes generate a comprehensive view of the sales landscape, identifying which HCPs are most urgent for a given sales representative to engage with at any given time. The solution presented in this article aims to showcase an innovative approach by seamlessly integrating these insights into Tableau subscriptions through Tableau Rest API systems. By doing so, sales representatives can receive timely and actionable insights directly through their preferred communication channels. This proactive approach empowers sales teams to stay ahead of the competition by eliminating the need to navigate complex dashboards to decipher data, allowing them to focus their time and efforts on engaging with the right HCPs at the right time.

Tableau

Tableau stands out in the realm of reporting and analytics due to its user-friendly interface and its ability to generate high-quality visualizations efficiently, making it a top choice for individuals and organizations alike [3]. This robust tool streamlines the process of data analysis and interpretation, allowing users to swiftly identify insights and discern key trends [1]. Developed by Tableau Software, the platform provides an intuitive and interactive environment for visually exploring, analyzing, and presenting data [2].

In our exploration of Tableau technologies, we focus on three key components: Tableau Server, Tableau Subscriptions, and Tableau REST API. Each of these components plays a crucial role in harnessing the full potential of Tableau for real-time insights delivery and integration with external applications.

Tableau Server serves as the foundation for collaboration and sharing within organizations. It enables users to publish Tableau workbooks and data sources to a centralized server, ensuring accessibility and security for all authorized users.

Tableau Subscriptions feature empowers users to stay updated on critical insights by automatically delivering reports and dashboards via email or other communication channels. By setting up subscriptions, users can receive relevant information directly to their preferred devices, ensuring timely decision-making.

Tableau REST API provides a powerful interface for integrating Tableau with external applications and systems. Leveraging the REST API, developers can programmatically interact with Tableau Server to perform tasks such as extracting data, managing users and permissions, and triggering events like subscriptions.

In the subsequent sections, we provide detailed guidance on leveraging Tableau subscriptions and the Tableau REST API to seamlessly integrate Tableau with an external application. We use GoAnywhere as an illustrative example, demonstrating how to trigger a pre-set subscription and facilitate the delivery of real-time insights to end-users.

Methods

Set Up Tableau Server:

In order to fully utilize the capabilities of Tableau subscriptions and Tableau REST API, the initial step involves setting up and ensuring accessibility to the Tableau Server. Acting as the centralized host for Tableau workbooks, data extracts, and subscriptions, the Tableau Server plays a pivotal role in facilitating seamless integration with external applications such as GoAnywhere. Establishing the Tableau Server environment serves as a foundational step in enabling the integration of Tableau subscriptions with GoAnywhere. This process requires the installation and configuration of the Tableau Server within your designated server environment. Follow the detailed steps outlined below to establish the Tableau Server environment:

System Requirements:
It is necessary to ensure that the server meets the minimum system requirements for Tableau Server. This would include considerations for hardware specifications, operating system compatibility, and other prerequisites. Visit the Tableau website by using the following link [4] https://www.tableau.com and download the appropriate version of Tableau Server for the operating system. Follow the installation instructions provided by Tableau, generally, this procedure entails executing an installer and configuring server settings to establish a functional Tableau Server environment.

**Configuration:**

During the installation process, configure Tableau Server with the necessary settings such as server name, administrator credentials, and port configurations. These settings are crucial for accessing and managing Tableau Server.

**Activation, Licensing & Security set:**

Once the configuration is complete, activate your Tableau Server license using the provided license key or activation code. Follow the prompts to complete the licensing process and validate your Tableau Server deployment. Security Setup: Implement security measures to safeguard access to Tableau Server and its resources. Configure user permissions, groups, and authentication methods to ensure secure access control and data protection.

**Initialize Tableau Server:**

After installation, initialize Tableau Server by starting the Tableau Server service. This will bring the server online and make it accessible. To access Tableau Server Web Interface: Open a web browser and navigate to the Tableau Server web interface. This interface, typically accessed through a URL like http://<servername>/, provides the administrative console for managing Tableau Server. **Create Tableau Server Admin Account:** Log in to the Tableau Server web interface using the administrator credentials set during the installation. Once logged in, create additional Tableau Server user accounts as needed, ensuring appropriate permissions for accessing workbooks and subscriptions. **Publish Tableau Workbooks:** Publish the Tableau workbooks containing the sales insights and visualizations to Tableau Server. This involves connecting Tableau Desktop to Tableau Server and selecting the appropriate project and permissions for the published workbooks. **Verify Accessibility:** Ensure that the published workbooks are accessible through the Tableau Server web interface. Test the URLs of the published workbooks to confirm their availability and correctness. **SSL Configuration (Optional):** For enhanced security, consider configuring SSL for Tableau Server. This involves obtaining SSL certificates and configuring Tableau Server to use HTTPS. SSL is especially important when integrating with external applications like GoAnywhere to ensure secure communication. **Backup and Recovery:** Implement a regular backup strategy for Tableau Server to safeguard critical data. Establish a recovery plan to quickly restore Tableau Server in case of unexpected issues. By diligently following these steps to set up Tableau Server, you create a robust foundation for the integration process. This foundation is crucial for hosting and managing Tableau workbooks, enabling seamless interaction with the Tableau REST API, and facilitating the integration with external applications such as GoAnywhere for triggering pre-set subscriptions.

**Obtain Tableau REST API Credentials:**

Generate Tableau Server REST API credentials by creating a Tableau Server account with the necessary permissions. These credentials will be used to authenticate and authorize API requests. **Goto My Account Settings**
Generate the Personal Access Token for the Rest API authentication.

Configure Tableau Workbook with Subscription:

Create or select a Tableau workbook that contains the data and visualizations processed by AI/ML model or SQL queries in the database[8] and relevant to your sales insights. Set up a subscription within Tableau by defining the required filters, parameters, and schedule for the automated delivery of insights. Subscriptions will send you an image or PDF snapshot of a view or workbook at regular intervals, eliminating the need for you to sign into Tableau Cloud.

Set up a subscription for the sales team:

When you open a view in Tableau Cloud, if you see a subscription icon () in the toolbar, you can subscribe to that view or to the entire workbook. You can subscribe other users who have permission to view the content if you own a workbook, if you are a project leader with an appropriate site role, or if you are an administrator.[5]

From the Explore section of your site, select All Workbooks or All Views, or open the project that contains the view you want to subscribe to.

Open a view either directly, or after opening the containing workbook.

On the view toolbar, select Watch > Subscriptions.

1. Add the Tableau users (Sales Rep) or groups you want to receive the subscription. To receive a subscription, users must have the View and Download Image/PDF permissions.
2. Choose whether subscription emails include the current view or the entire workbook. If the view contains data only when high-priority information exists, select Don’t send if view is empty.
3. Choose the format for your snapshot: as a PNG image, a PDF attachment, or both.
4. If PDFs, choose the paper size and orientation you’d like to receive.

1. To clarify subscription emails, customize the subject line, and add a message.
2. When the workbook uses one data extract on a published connection, you can pick a frequency:
3. **On Selected Schedule**: Pick a schedule for the subscription.
4. Click the drop-down arrow to the left of the current settings to pick a schedule:
1. Pick a schedule that is disabled as this schedule will be enabled using the Go-Anywhere process after the data is loaded.
2. Click **Subscribe**.
3. **Understand Tableau REST API Endpoints:**

Familiarize yourself with Tableau REST API endpoints, especially those related to authentication and subscriptions. [6] Key endpoints include:

**Login:**
```
servername> /api/3.22/auth/signin
```

**Enable/Disable Schedule:**
```
PUT /api/api-version /schedules/schedule-id
```

**Attribute Values**

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>new-schedule-name</td>
<td>The new name to give to the schedule.</td>
</tr>
<tr>
<td>new-schedule-priority</td>
<td>An integer value between 1 and 100 that determines the default priority of the schedule if multiple tasks are pending in the queue. Lower numbers have higher priority.</td>
</tr>
<tr>
<td>new-schedule-executor-order</td>
<td>Parallel to allow jobs associated with this schedule to run at the same time, or serial to require the jobs to run one after the other.</td>
</tr>
<tr>
<td>new-schedule-frequency</td>
<td>The granularity of the schedule. Valid values are:</td>
</tr>
<tr>
<td></td>
<td>• Hourly: Jobs can be scheduled to run once or more times per day at intervals specified in minutes or hours. Valid intervals are 15 and 30 minutes and 2, 4, 6, 8, and 12 hours.</td>
</tr>
<tr>
<td></td>
<td>• Daily: Jobs can be scheduled to run once per day.</td>
</tr>
<tr>
<td></td>
<td>• Weekly: Jobs can be scheduled to run once or more times per week.</td>
</tr>
<tr>
<td></td>
<td>• Monthly: Jobs can be scheduled to run once per month on a specific day.</td>
</tr>
</tbody>
</table>

The value you provide for `schedule-frequency` determines whether you must include an `end-time` value, and what is required in the contents of the `<intervals>` element.

| new-state         | Active to enable the schedule, or suspended to disable it.                |
| start-time        | The time of day on which scheduled jobs should run (or if the frequency is hourly, on which they should start being run), in the format `HH:mm:ss`. This value is required for all schedule frequencies. The entered time will be applied based on the time zone of your server. |
| end-time          | If the schedule frequency is `monthly`, the time of day on which scheduled jobs should stop being run, in the format `HH:mm:ss`. Hourly jobs will occur at the specified intervals between the start time and the end time. For other schedule frequencies, this value is not required; if the attribute is included, it is ignored. The entered time will be applied based on the time zone of your server. |
| interval-expression | A value that specifies the interval between jobs associated with the schedule. The value you specify here depends on the value of `schedule-frequency`. |

**Obtain GoAnywhere Credentials:**

Ensure you have access to GoAnywhere and obtain the necessary credentials to authenticate and establish connections from the external application to Tableau Server.

**Establish Connection to Tableau Server from GoAnywhere:**

Configure GoAnywhere to establish a secure connection to the Tableau Server using the Tableau REST API credentials obtained earlier. Use the `/auth/signin` endpoint to authenticate the session. **Authenticate:**

Use the Tableau Personal Access Token (PAT) obtained in 3.2 to authenticate using Tableau Rest API from GoAnywhere application.
Check if the insights are ready to trigger the Tableau Subscription. If ready, then enable the subscription schedule by setting a run time using “Update Server Schedule” rest api PUT /api/api-version/schedules/schedule-id Use the attributes “new-state” = Active and start-time=15 minutes from now and end-time is 30 minutes from now. At the start-time the subscription will run the report and send personalized alerts to the users that are set in the subscription and then at the end-time it will disable the schedule. Lastly, use the Tableau Signout API to disconnect from Tableau.

servername>/api/3.22/auth/signout

Schedule GoAnywhere Workflow:

Configure the GoAnywhere workflow to run on a scheduled basis aligned with the Tableau subscription schedule. This ensures that the external application triggers the Tableau subscription at the specified intervals.

Monitor and Troubleshoot:

Regularly monitor the execution of the GoAnywhere workflow and Tableau subscriptions. Implement logging and error handling within the workflow to facilitate troubleshooting in case of any issues.

Scale and Optimize:

By following the above steps, you can seamlessly integrate Tableau subscriptions with an external application like GoAnywhere, automating the delivery of personalized, real-time insights to sales teams, and streamlining the decision-making process in the pharmaceutical and healthcare sales landscape. As your sales operations evolve and your organization’s needs change, it’s essential to continuously evaluate and enhance the integration between Tableau subscriptions and external applications like GoAnywhere. Scaling and optimizing the integration ensures that it remains aligned with evolving business requirements and maximizes its efficiency and effectiveness. Consider the following strategies to scale and optimize the integration:

1. Refine Tableau Workbooks: Regularly review and refine the Tableau workbooks used for generating insights. This may involve updating visualizations, incorporating new data sources, or optimizing data models to ensure that the insights provided remain relevant and actionable for the sales teams.
2. Adjust Subscription Parameters: Evaluate the subscription parameters, including filters, frequency, and delivery formats, to ensure they align with the changing needs of the sales teams. Adjustments may be necessary based on shifting priorities, seasonality, or changes in market dynamics to ensure that sales representatives receive the most pertinent information in a timely manner.
3. Enhance GoAnywhere Workflow: Continuously improve the GoAnywhere workflow to enhance its functionality and performance. This may involve optimizing data processing pipelines, refining error handling mechanisms, or incorporating new features to automate additional tasks related to sales operations.

Sending Personalized Insights as Text Message
In the United States, each mobile phone number is typically associated with an email address through which text messages can be sent using email-to-SMS gateways provided by mobile carriers. For example, for AT&T users, the email address follows the format: 10-digit-phone-number@txt.att.net. Similarly, T-Mobile users can receive text messages via email using the format: phonenumber@tmomail.net. Here’s how to send personalized insights as text messages using these email-to-SMS gateways:

1. Identify Recipient’s Mobile Carrier: Determine the mobile carrier associated with each recipient’s phone number. This information is crucial for selecting the appropriate email-to-SMS gateway domain.

2. Compose Email: Create a new email.

3. Enter Recipient’s Email Address: In the “To” field of the email, enter the recipient’s 10-digit wireless number followed by the appropriate email-to-SMS gateway domain. For example: For AT&T: 5551234567@txt.att.net

4. Compose Message: Craft your message containing the personalized insights, recommendations, or alerts that you wish to send to the recipient.

5. Send Email: Once you have composed your message, send the email. The recipient will receive the contents of the email as a text message on their mobile device. By utilizing the email-to-SMS gateways provided by mobile carriers, you can leverage existing infrastructure to deliver personalized insights directly to recipients’ mobile phones as text messages. This approach ensures that recipients receive important information in a timely manner, regardless of their access to email or other communication channels.

Conclusion

The integration of Tableau subscriptions with external applications such as GoAnywhere represents a significant advancement in the realm of sales analytics, particularly within the pharmaceutical and healthcare industries. By harnessing the power of Tableau’s dynamic reporting and visualization capabilities, coupled with the seamless connectivity offered by the Tableau REST API, organizations can automate the delivery of personalized, real-time insights directly to sales teams’ preferred communication channels.

Throughout this article, we have explored the step-by-step process of setting up Tableau Server, configuring Tableau workbooks with subscriptions, and establishing connections between Tableau Server and GoAnywhere. By following these guidelines, organizations can streamline their sales operations, enabling sales representatives to make informed decisions quickly and efficiently.

Moreover, the utilization of email-to-SMS gateways allows for the dissemination of insights as text messages, ensuring that critical information reaches sales teams regardless of their access to traditional communication channels. This approach not only enhances the agility and responsiveness of sales teams but also maximizes the utilization of existing infrastructure and resources. As sales operations continue to evolve in response to changing market dynamics and technological advancements, it is imperative for organizations to remain adaptable and innovative. The integration of Tableau subscriptions with external applications exemplifies a proactive approach to sales analytics, empowering organizations to stay ahead of the competition and drive business growth.

References:


To get a credentials token, you are signing in to.

7. ATT Email to Text https://www.att.com/support/article/wireless/KM1061254/