

Laravel Developer Required for Bulk WhatsApp Message Sending & Calculation using 360 Dialog API

Project Brief

- We have already build an Application where our customer can be able to send WhatsApp messages to his/her contacts after importing the contacts.
- The portal will have 2 stakeholders. **Customers & Admin.**
- The existing WhatsApp application has been built in **PHP** as the Front-end using **Laravel** Framework, **Maria DB** as Database.
- The system is used to send WhatsApp messages using **360 Dialog** Cloud API which uses **Meta Cloud API**.
- **Laravel Application -> 360 Dialog Cloud API -> Meta (WhatsApp Cloud API)**
- Each Customer account will be considered as Business. Contacts will be customer of the Business after importing the contacts into the application by the customer after login to the account.
- In 360 Dialog, 1 WABA registered number have Client ID, Channel ID (for each unique WhatsApp Business Registered in WhatsApp Business API).
- 1 SMS Point customer account can have multiple Channels. But using Cloud API, only 1 channel can be active.

Requirements

- After login to the portal, customer need to procure the WhatsApp service from the portal.
- After purchasing, Customer can send Bulk WhatsApp messages to his / her contacts (Mobile Numbers in lakhs/crores) in a single submission/transaction.
- But **Meta / 360 Dialog API policy**, in a single API call, messages sent to only **One (1)** WhatsApp number in a single API call along with Tier limit as maintained by Meta.
- In this scenario, system should manage the bulk WhatsApp sending logic in PHP (Laravel Application). Either use **Multi-threads** / any other mechanism. For each user, system should use **TPS** limit as per 360 Dialog & Meta policy.

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- Country wise **Meta** conversation pricing & message sending calculation need to be done as per Meta pricing. (Calculation Mechanism of Sending Business Initiated & User Initiated messages & it must have to consider 24 hour rolling period as per Meta policy).
- Reading message data broadcast details along with statistics in customer panel using Webhooks.

Terms & Conditions

- Our system is having API all the REST APIs has been developed in PHP (Laravel).
- The application consists of APIs, using which other developers can be able to integrate their application into the WhatsApp service.
- 360 Dialog API / Meta Cloud API call parameters & response details will be provided by NT SPL development team.
- Screen wise prototype screenshots will be shared by NT SPL team. Attached in **Annexure – I.**
- The **Laravel** developer need to develop the message sending calculation mechanism as per Meta policy & bulk message sending using API call for the portal.
- Each code need to be developed in **Laravel** by the developer along with their case studies and results/response with POC (Screenshots) also need to be shared with NT SPL.
- The Laravel developer need to share the entire codes & databases which should work in our project.
- Post completion of the Job, NT SPL development team will test all the work developed by the laravel developer.
- If all the work (Coded in **Laravel** by the Laravel developer) will work as per the requirements, then only work will be considered as completed & milestone will be completed.
- The developer need to share the milestone for the entire task & NT SPL team need to approve the milestone for starting of the job.
- Based on 100% completion status of the milestone, NT SPL will make the payment.

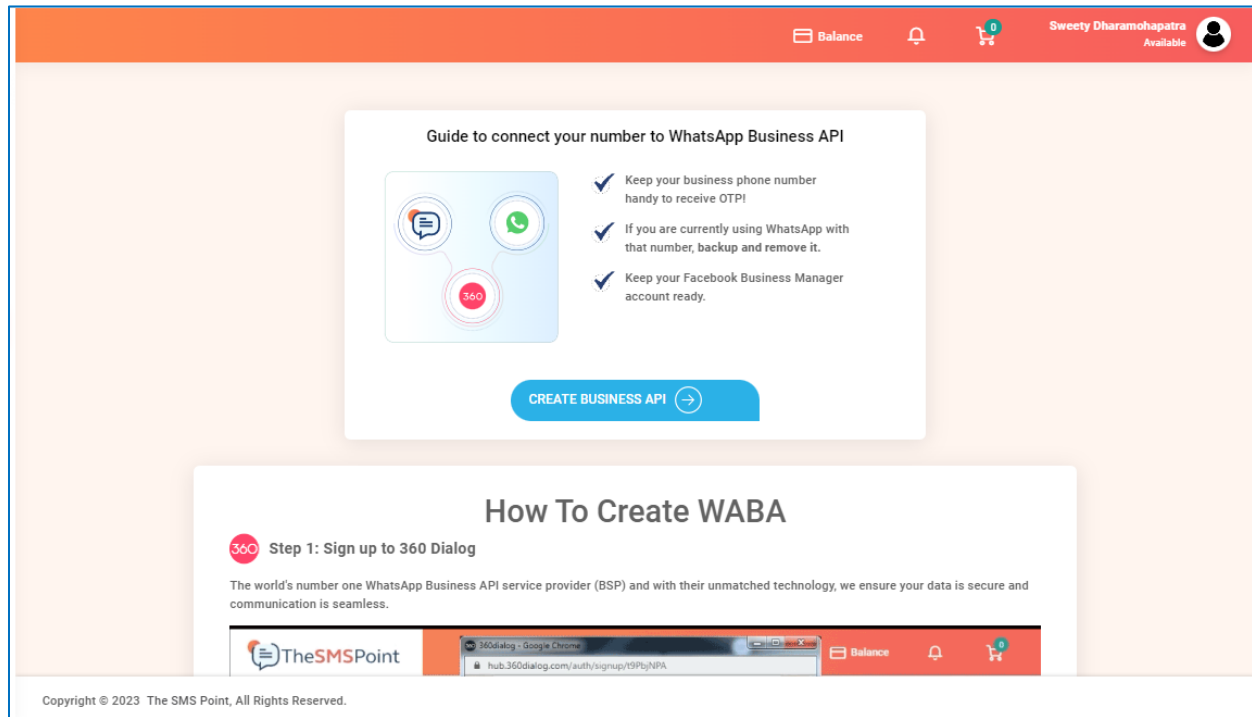
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- This module need to develop with the following technology stack. (**PHP Laravel & Maria DB**)
- Individual Developer / Company who is having expertise in integrating Meta Cloud API & based on Meta **TPS** limit within 24 hours rolling period will be given priority.
- Before awarding the project, Individual Developer / Company should have to show the past experience in integrating Meta Cloud API & must have to demonstrate a POC with integrating Bulk message sending using Meta Cloud API.
- Work should be completed before 25/10/2023.
- UI design will be shared by NTSPL team.
- Every milestone, our development will approve the job & after that payment will be released.

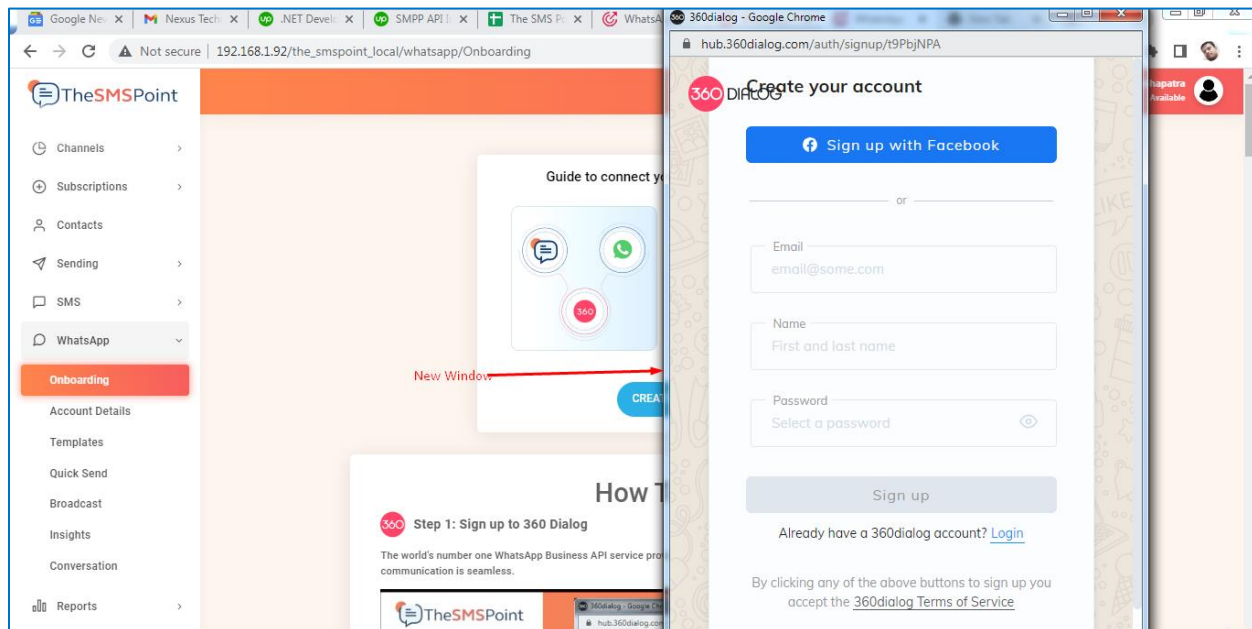
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Annexure – I (Laravel Application Prototype Screenshots)

1. Customer Onboarding to 360 Dialog after Login to the Portal



2. Customer On boarded into 360 Dialog & create Meta WhatsApp Business Account



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3. Redirected to Account Details & data updation using Partner Webhook

Balance

0

Sweety Dharamohapatra
Available

Dashboard » WhatsApp » Account Details

Account Details

Profile

Name	Rajesh Jena
Email	rajesh.jena@ntspl.co.in
Client ID	UEOJWUnzCL
Phone Number	918260003333

WhatsApp Channel

Channel ID	4SPdtxCH
Channel Status	ready
App ID	123425
Phone Number	918260003333
WhatsApp Display Name	NTSPL Official

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4. Add WhatsApp Template

TheSMSPoint

Dashboard

Channels

Subscriptions

Contacts

Sending

SMS

WhatsApp

Reports

Threshold Limit

Developers

Balance

0

Sweety Dharamohapatra Available

Dashboard

WhatsApp

Create Template

Create Template

Template Name * 15/60

test_template_4

*Note:- Name can only contain lowercase alphanumeric characters & underscores (_)

Category * UTILITY

Allow Category Change * Yes

Language * English(UK)

Message Header Optional

Highlight your message by adding a custom text or media

☒ None ☐ Text ☐ Image ☐ Video ☐ Document

Message Body

Type in the message you want to share with your users.

Hii {{(1)}},

58/1024

Add Variables

Variable Name	Sample Value *
variable_1	Rakesh
variable_2	ORD1234
variable_3	5/10/2023

Enter a sample value for your variables to give context to the WhatsApp's template approval team.

Footer Optional

Add a short line of text to the bottom of your message template. If you add the marketing opt-out button, the associated footer will be shown here by default.

33/60

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Buttons Optional

Select the type of CTA's or quick replies you want to provide to your users.

☐ None ☐ Call to Action ☒ Quick reply

Button 1 Yes

Button 2 No

Submit

NTSPL

Hii {{(1)}}, Thank you for your Order {{(2)}} on dated {{(3)}}.













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Message

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5. Template Listing

The screenshot shows a web application interface for managing WhatsApp templates. At the top, there's a navigation bar with 'Balance', a notification bell, a shopping cart icon with '0', and a user profile for 'Sweety Dharamohapatra' with the status 'Available'. Below the navigation bar, a breadcrumb trail reads 'Dashboard » WhatsApp » Templates'. The main section is titled 'WhatsApp Templates' and includes an 'Add New' button. A 'Show: 10' dropdown and a 'Filter: Name / Category / Language / Status' search bar are present. The templates are listed in a table with columns: Sl No., Template Name, Category, Preview, Language, Status, and Action. Four templates are listed, all in the 'MARKETING' category and 'en_US' language, with a status of 'APPROVED'. Each template has a preview of its content and three action icons (edit, copy, delete).

Sl No.	Template Name	Category	Preview	Language	Status	Action
1	nip_apply_job	MARKETING	Dear {{(1)}}. Greetings from the NTSPL! Thank you for submitting your application for the {{(2)}} po...	en_US	APPROVED	  
2	nip_joining_date_finalization	MARKETING	Dear {{(1)}}. Your joining date has been scheduled on dated {{(2)}} for the post of {{(3)}}. Please reac...	en_US	APPROVED	  
3	nip_document_verification_finalization	MARKETING	Dear {{(1)}}. Your document verification date has been finalized on dated {{(2)}} for the post of {{(3)}}...	en_US	APPROVED	  
4	nip_document_upload_link_reschedule	MARKETING	Dear {{(1)}}. Welcome to NTSPL!! We are very pleased to welcome you on-board for the post {{(2)}}. P...	en_US	APPROVED	  

6. After Addition of Template & Template Approved by Meta & 360 Dialog, Customer can be able to Send Bulk WhatsApp messages in a single click.

This page will consisting of 3 Tabs in customer login.

- **Tab 1 – Select Audience**
- **Tab 2 – Select Template**
- **Tab 3 – Review & Send**

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Tab 1

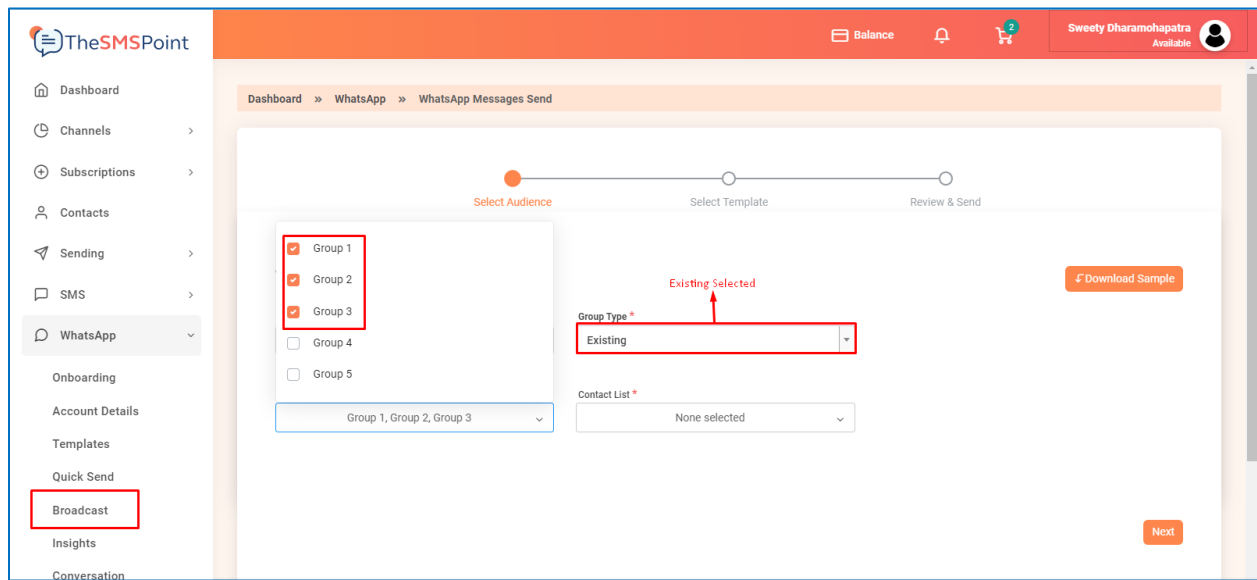
Select contacts from group / import contacts from Excel sheet.

The screenshot shows the 'WhatsApp Messages Send' interface on TheSMSPoint. The left sidebar has a menu with 'Broadcast' highlighted. The main content area has a progress bar with three steps: 'Select Audience' (active), 'Select Template', and 'Review & Send'. Below the progress bar, there's a form titled 'WhatsApp Messages Send'. It includes a 'WABA *' field with the value '+918260003333' and a 'Group Type *' dropdown menu with 'Select' as the current option. There are 'Download Sample' and 'Next' buttons.

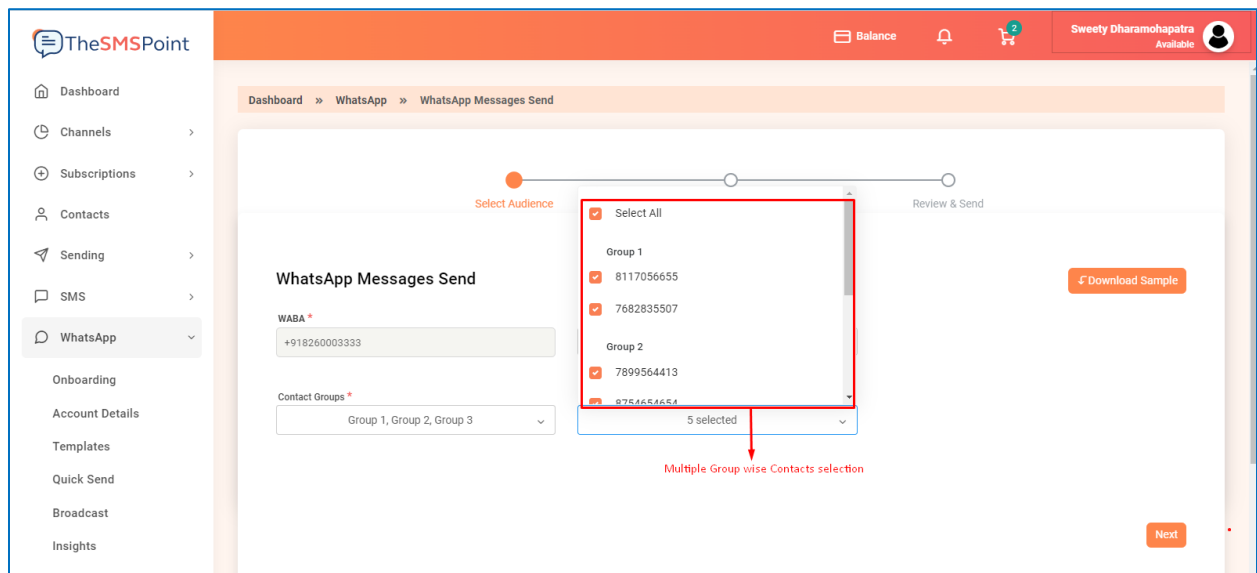
This screenshot is similar to the previous one but includes annotations. A red box highlights the 'Select Audience' step in the progress bar, with a red arrow pointing to it labeled 'Step 1'. Another red box highlights the 'Group Type *' dropdown menu, which now shows a list of options. Below the dropdown, the text 'Select Group Type (Existing / New)' is visible. The 'Broadcast' option in the left sidebar is also highlighted with a red box and an arrow.

Either Select **Existing** from Group Type Dropdown. In this scenario, user need to select the existing Contact Group (Multiselect) & based on that, Contacts List (Multiselect) will be loaded into the dropdown.

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After selecting multiple Groups from the dropdown list, it will display the mapped contacts into the Groups. It will display Option Group wise contacts number.



After that click the Next button to move to the **Tab 2**.

OR

Select **New** from Group Type dropdown. In this Scenario, customer need to download the sample file into system & fill the data in the Excel sheet & upload into the portal.

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TheSMSPoint

Dashboard » WhatsApp » WhatsApp Messages Send

Progress: Select Audience — Select Template — Review & Send

WhatsApp Messages Send

WABA *
+918260003333

Group Type *
New

Import File *
Upload File Browse Upload

Download Sample Excel File

Download Sample

Next

After downloading the Excel file, customer need to fill the Excel file data. Contact Name, Country Code, Mobile No & Email is Mandatory. Column 5, 6, 7, 8, 9, 10 are optional.

SL.No	Contact Name	Country Dial Code	Mobile No	Email	Column 5	Column 6	Column 7	Column 8	Column 9	Column 10
1	Shivaram Mahapatro	+91	7682665507	shivaram@gmail.com	41	22	11	24	45	41
2	Pinaki Dash	+91	4587056655	rakesh@ntspl.co.in	poor					
3	Soudhankhi Dalai	+91	7064788255	debasis@ntspl.co.in				bad		
4	Swagat Senapati	+93	6370633785	ssenapati@gmail.com						
5	Binduysagar Bal	+91	7656679785	paresh.sahoo@gmail.com						
6	Soumya Ranjan	+91	7897652314	balaram@gmail.com	good					

After uploading the excel file data into the portal, application will display Imported data including success & failed number of rows.

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TheSMSPoint

Dashboard » WhatsApp » WhatsApp Messages Send

Select Audience Select Template Review & Send

WhatsApp Messages Send

WABA *
+918260003333

Group Type *
New

Import File *
Upload File Browse

Download Sample

Upload Click the Button

Next

After fill the Excel Sheet, select the Excel file to Upload into the system.

TheSMSPoint

Dashboard » WhatsApp » WhatsApp Messages Send

WhatsApp Messages Send

WABA *
+918260003333

Group Type *
New

Import File *
Upload File Browse

Download Sample

Upload

It will display the Number of rows successfully imported _failed rows

Import Details

Total Row: 3 Total Success: 3 Total Error: 1

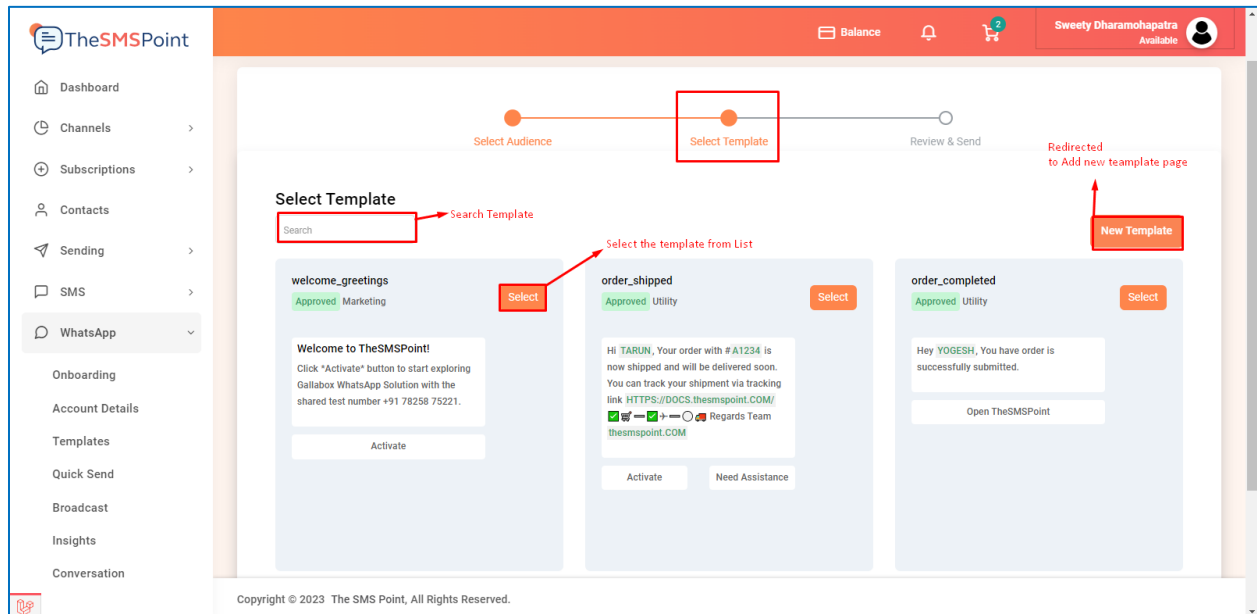
Sl No.	Line No.	Attribute	Error
1	3	Contact details (87056655)	Mobile no must not less than 9 and more than 12
2	6	Contact details (679785)	Mobile no must not less than 9 and more than 12
3	7	Contact details ()	Email field is empty

Next

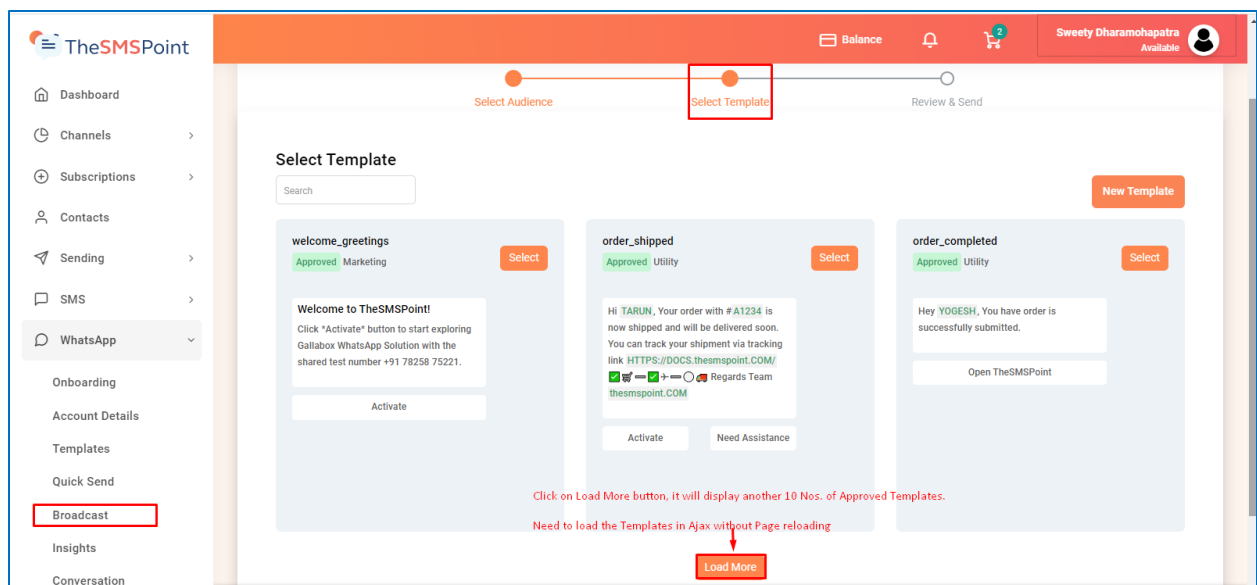
- After that click the Next button to move to the **Tab 2**.
- Select Template from list already added / add new template (**Tab 2**)

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Tab 2

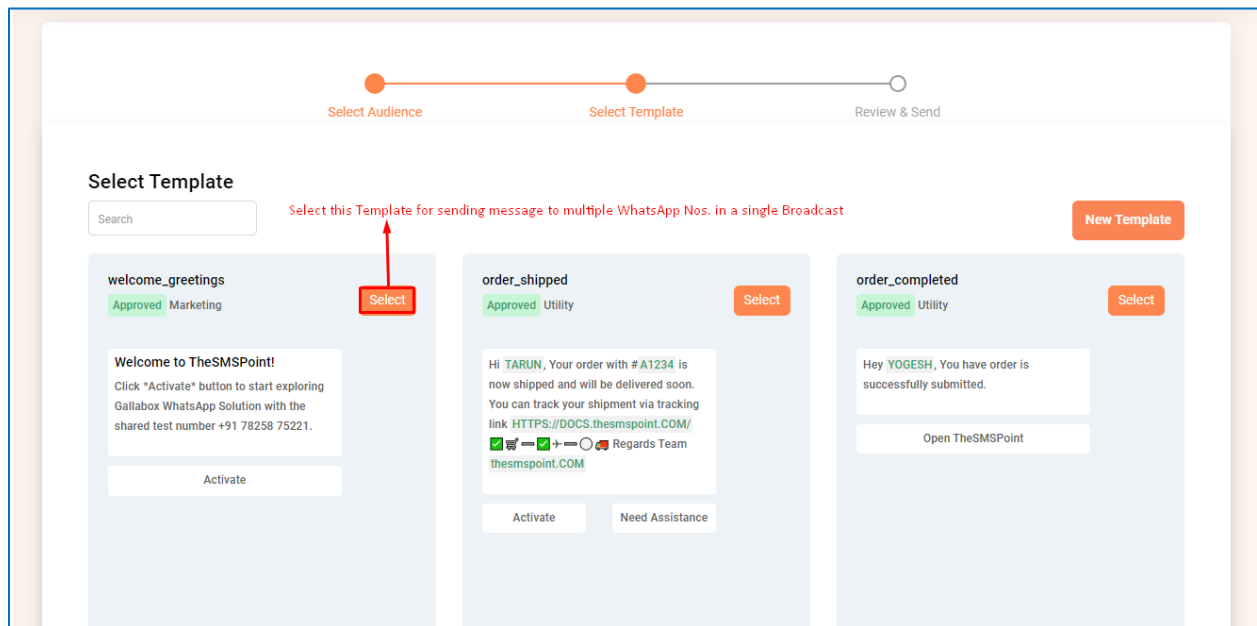


In the Tab 2 screen, customer can click the **Select** button as highlighted in the above Image.

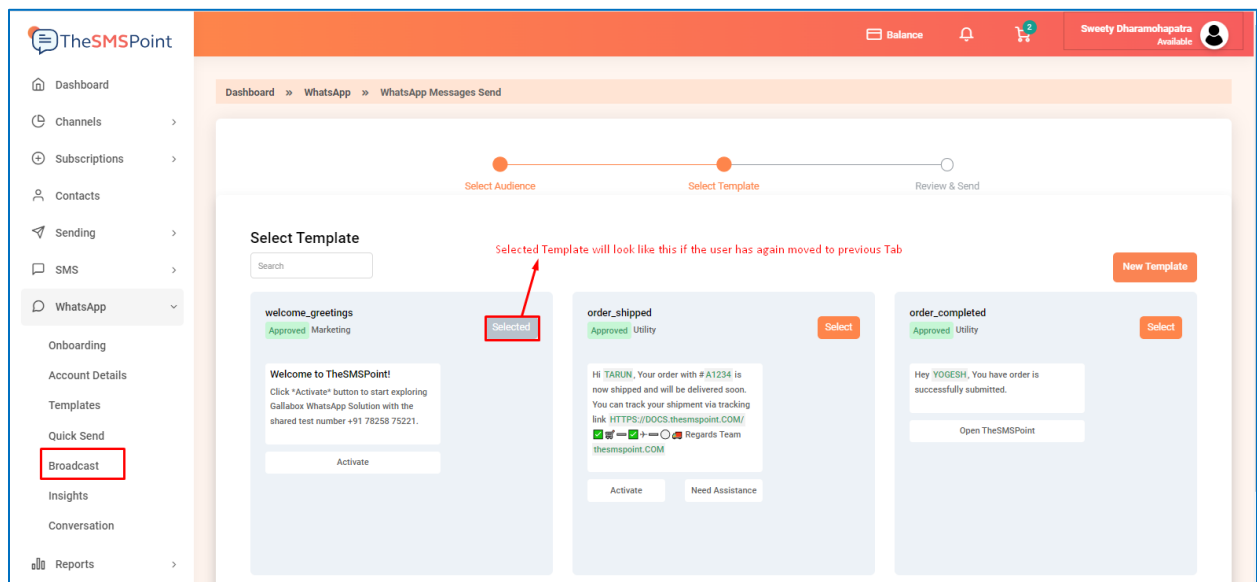


Customer can click on the **Load More** button to load another **10** number of **approved** Templates as showing in the above Image.

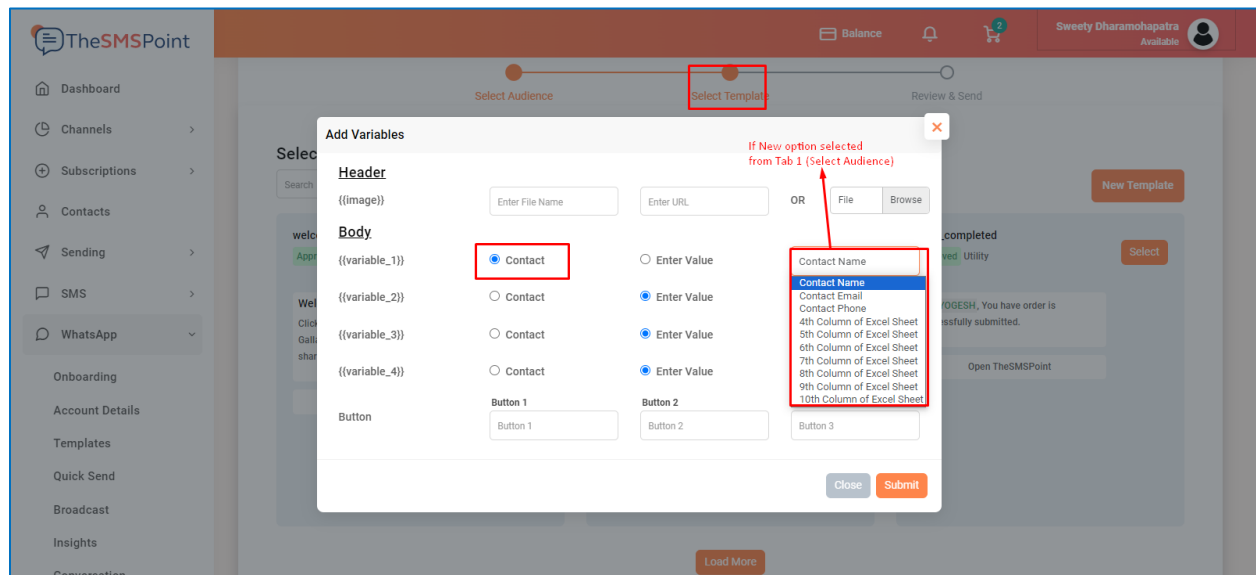
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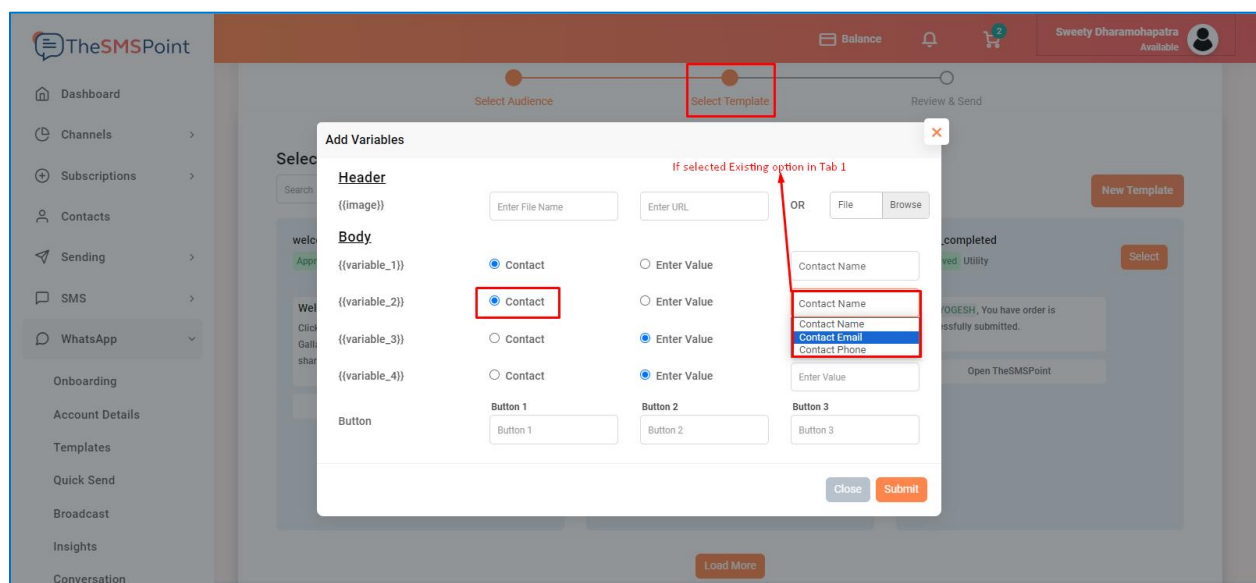
Once the template has been selected by the Customer, selected template button color will be changed to another color & can be visible with selected color when the customer will move back to the previous **Tab**.



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- Upon selection of the Template & if the template consists of **Dynamic** variables only, Modal Popup will be displayed to the customer as shown in the above Image.
- For each dynamic variable in the Template, customer need to select either **Contact** OR **Enter Value** option.
- If the customer have selected **Contact** & imported the contacts from Excel file, it will be displayed as per the above Image.



- If the customer have imported the contacts from Existing contact groups, it will be displayed as per the above Image.

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- Only Name, Email, Mobile No. fields need to be displayed against each dynamic variable.
- Customer need to select which variable need to select from the dropdown.

The screenshot displays the 'TheSMSPoint' dashboard with a sidebar menu on the left containing options like Dashboard, Channels, Subscriptions, Contacts, Sending, SMS, WhatsApp, Onboarding, Account Details, Templates, Quick Send, Broadcast, Insights, and Conversation. The main area shows a 'Select Audience' and 'Select Template' workflow. A modal titled 'Add Variables' is open, allowing users to configure dynamic variables for a message template. The modal is divided into 'Header' and 'Body' sections. The 'Header' section has a single variable slot for an image, with options to 'Enter File Name', 'Enter URL', or 'File' (with a 'Browse' button). The 'Body' section contains four variable slots, each with a dropdown menu to select a variable type (Contact, Enter Value, or Enter Value) and a corresponding text input field. The 'Enter Value' options are highlighted with red boxes. At the bottom of the modal, there are three 'Button' slots (Button 1, Button 2, Button 3) for configuring interactive elements. The modal also includes 'Close' and 'Submit' buttons.

- If the Template is having dynamic variable (Image / Document / Video), customer need to enter the File Name after uploading of the File.
- Customer can directly enter the file URL OR upload the file which will be uploaded to the system & generated the file URL & automatically appended on the File URL text Box as shown in the below Image.
- Customer need to provide Button text to be displayed if the template consists of Buttons when the message will be delivered to the end user in WhatsApp. It may consists of 1 Button / 2 Button / 3 Button as per the Template approved as shown in the below Image.

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The screenshot shows the 'Add Variables' modal in TheSMSPoint. The modal is divided into three main sections: Header, Body, and Buttons. The Header section has a label 'Header' and a placeholder 'Header'. The Body section has four variables: {{variable_1}}, {{variable_2}}, {{variable_3}}, and {{variable_4}}. Each variable has two radio buttons: 'Contact' and 'Enter Value'. The 'Contact' radio button is selected for all variables. To the right of each radio button is an input field. The Buttons section has three buttons labeled 'Button 1', 'Button 2', and 'Button 3'. A red box highlights the Buttons section, and a red arrow points to it with the text: 'Optional. If the template have buttons. If 1 Button, then only 1 button to be displayed.' The modal also has 'Close' and 'Submit' buttons.

After filling up the data, customer need to click the **Submit** button in the Modal dialog box. After that, customer need to click on the **Next** button towards bottom of the **Tab 2**.

Tab 3

Send Broadcast messages to multiple WhatsApp number using WhatsApp service.

The screenshot shows the 'Schedule Broadcast' form in TheSMSPoint. The form has a 'Broadcast Name' field and a 'Schedule the Broadcast' section with two radio buttons: 'Send immediately' and 'Schedule date'. The 'Send immediately' radio button is selected. A red box highlights the 'Send immediately' radio button. To the right, a 'Preview 1/3' section shows a sample message: 'Welcome Greetings Approved MARKETING Welcome to TheSMSPoint! Click "Activate" button to start exploring Gallabox WhatsApp Solution with the shared test number +91 78258 75221. Activate'. A red box highlights the 'Preview 1/3' section, and a red arrow points to it with the text: 'Display the exact messages will look like to each number'.

- Customer need to enter the Broadcast name & select the option either **Send Immediately** OR **Schedule Date** as shown in the above Image.

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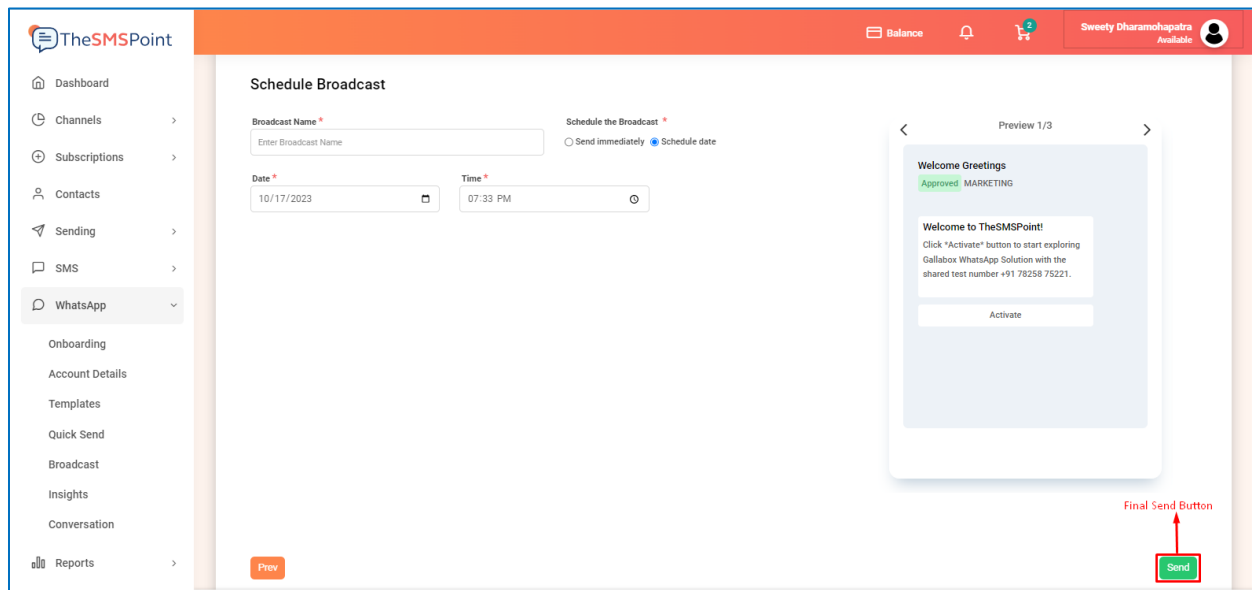
- Customer can be able to view all the selected customer exact messages after replacing the values selected with the Dynamic variables if available in the Template in the **Tab 2** as shown in the above Image.

The screenshot shows the 'Schedule Broadcast' interface in TheSMSPoint. The top navigation bar includes 'Balance', a notification bell, a shopping cart with 2 items, and the user profile 'Sweety Dharamohapatra Available'. The left sidebar lists various features: Dashboard, Channels, Subscriptions, Contacts, Sending, SMS, WhatsApp, Onboarding, Account Details, Templates, Quick Send, Broadcast, Insights, and Conversation. The main content area has a progress bar with three steps: 'Select Audience', 'Select Template', and 'Review & Send' (highlighted with a red box). Below the progress bar, the 'Schedule Broadcast' form includes a 'Broadcast Name' field, a 'Schedule the Broadcast' section with 'Send immediately' and 'Schedule date' (selected) options, a 'Date' field with a calendar dropdown (showing October 2023 with the 17th selected), and a 'Time' field. A preview of the WhatsApp message is shown on the right, titled 'Welcome Greetings' with status 'Approved MARKETING'. The message content says 'Welcome to TheSMSPoint! Click *Activate* button to start exploring Gallabox WhatsApp Solution with the shared test number +91 78258 75221.' and includes an 'Activate' button.

This screenshot shows the same 'Schedule Broadcast' interface, but with the 'Time' dropdown menu open. The date is now set to '10/17/2023'. The time selection menu shows a grid of options: 07, 31, PM in the top row; 08, 32, AM; 09, 33; 10, 34; 11, 35; 12, 36; and 01, 37 in the bottom row. The preview on the right remains the same, showing the 'Welcome Greetings' message template.

Customer need to select the Date & Time if the selected with **Scheduled Date** option in **Tab 3** as shown in the above Image.

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- After that customer need to click on the **Send** button in **Tab 3**.
- Once submitted, application will use Multi-threads / any other technique to send the WhatsApp message to each unique number by calculating the **TPS** (Transactions per Second) limit set for the Channel / Number.
- But if the channels Quality rating will be downgraded / upgraded as per the Webhook response, system should program that way to send & receive the messages to unique numbers. **I.e.** If a Channel / WABA Registered No. is having High Quality rating & message limit is **TIER_1K**, 1000 messages to unique numbers (including **BI** & **UI**) in a **24** hour rolling period.
- If a channel is having 10000 messages limit, Business can send & receive 10000 messages to unique numbers in a 24 hour rolling period.
- Quality rating can be upgraded / downgraded as per Meta. So based on that message sending system need to be developed & implemented the balance deduction logic & User Initiated conversations.

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7. Broadcast listing

After that application will redirected to the Broadcast Listing page as shown in the below Image.

The screenshot shows the 'Broadcast' listing page in TheSMSPoint. The left sidebar contains navigation options: Contacts, Sending, SMS, WhatsApp (selected), Onboarding, Account Details, Templates, Quick Send, Broadcast (highlighted), Insights, Conversation, Reports, and Threshold Limit. The main content area shows a table of broadcast messages. A red arrow points from the 'Sent' column of the first row to the text 'After the Submission, Application will be redirected to Broadcast Listing page'.

SI No.	Broadcast Name	Schedule At	Recipients	Sent	Delivered	Read	Replied	Failed	Status	Action
1	Diwali Greetings	1 July 2023 18:58	3	2	2	2	1	1	COMPLETED	

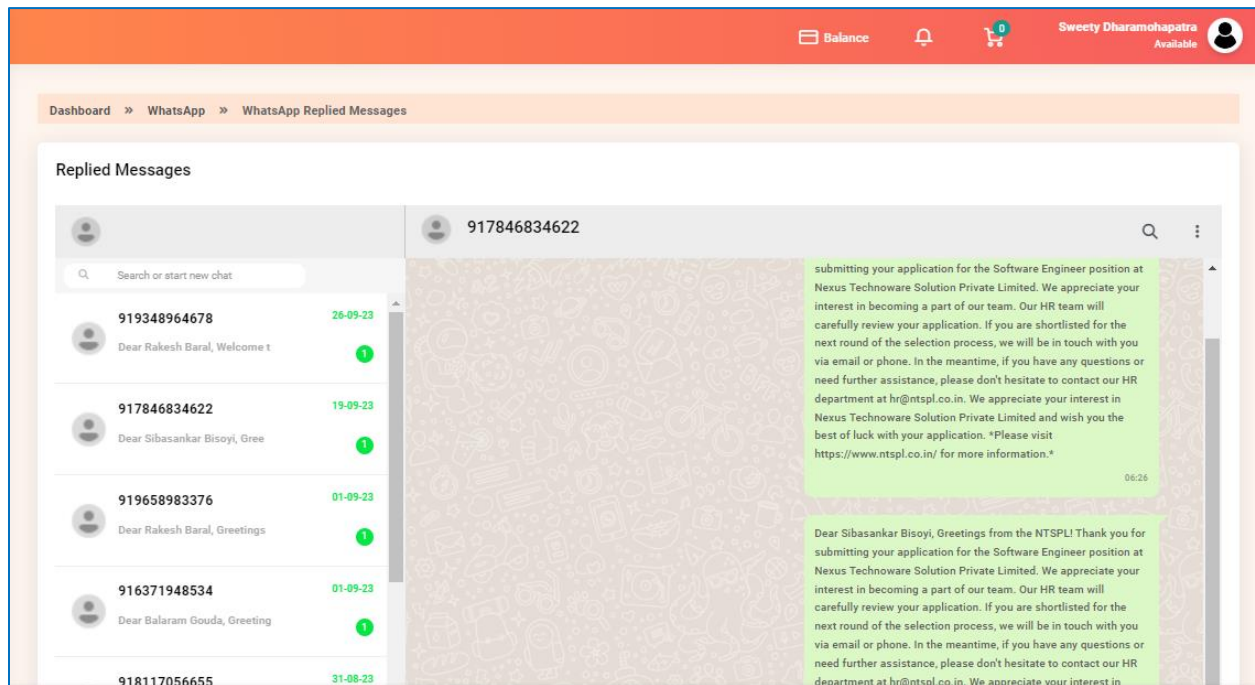
8. Broadcast details after the Broadcast sending to multiple number.

The screenshot shows the 'WhatsApp Message Details' page in TheSMSPoint. The left sidebar is the same as in the previous image. The main content area shows the details of a broadcast message. It includes a summary of recipients, sent, delivered, read, replied, and failed counts. Below this is a table of recipients with columns: SI No., Name, Phone, and Action. A red arrow points from the 'Sent' column of the first row to the text 'After the Submission, Application will be redirected to Broadcast Listing page'.

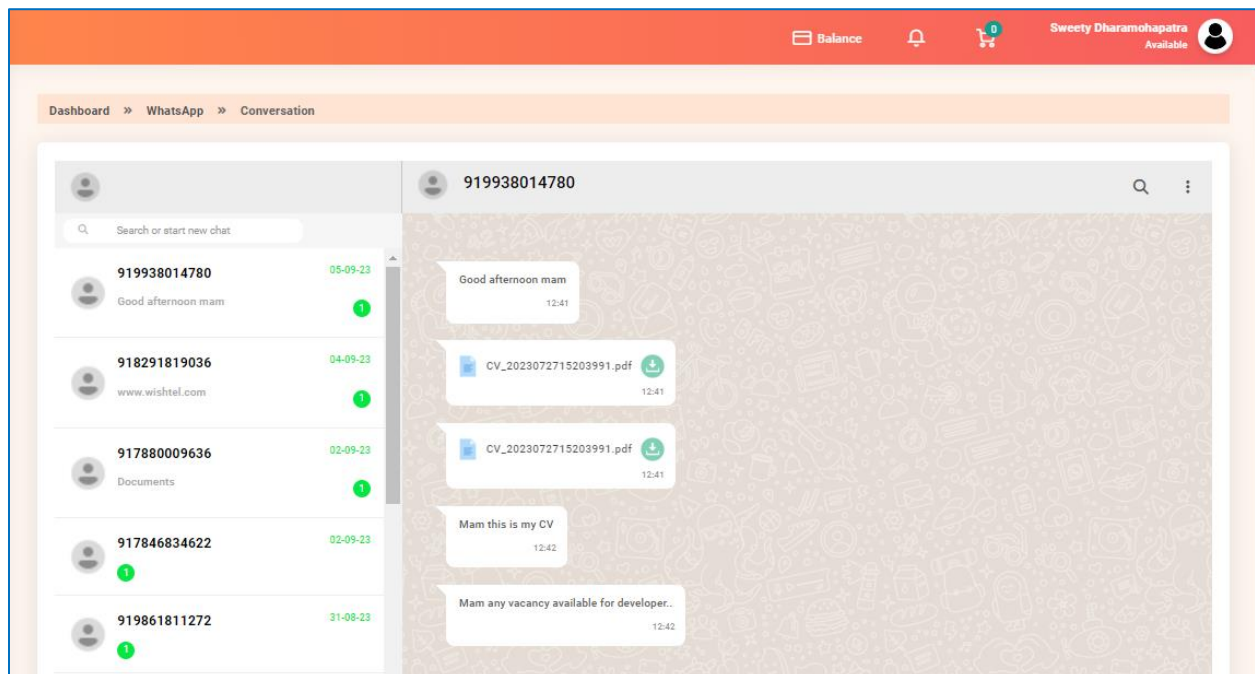
SI No.	Name	Phone	Action
1	Uttam Kumar	9583722121	
2	Soumya Ranjan	9583458565	
3	Soudhankhi Dalai	9348964678	

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9. Broadcast replies by Business' contacts & Business can reply to any user message (2 Way).



10. Conversation listing & details by Business & their contacts.



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Balance Calculation Logic for BI & UI Conversation in Meta & 360 Dialog Policy.

- Category wise & country wise pricing details has been maintained in the database.
- Balance deduction process when a Customer (Business Initiated) sending message to a contact number in WhatsApp & when a contact sends a message / replies within & after 24 hours rolling period (Service Category) using Country code wise conversation pricing.
- Balance to be deducted from wallet balance after calculating 24 hour rolling period from last Template message / session message.
- Data submission to application database & stored in the temporary table database for Bulk processing.
- Sending Bulk message sending **360 Dialog Cloud API** integration.
- Calculate logic for sending session message / Template message as per the 24 hour rolling period to a particular number.
- If the 24 hour expired since the last message that user has replied /sent to the Business, then Business can only sent the Template message to the contact.
- Balance deduction process when a Customer (Business Initiated) sending message to a contact number in WhatsApp using Country code wise conversation pricing.
- Balance to be deducted from 1st available Wallet Balance against the Customer.
- Balance to be deducted from wallet balance after calculating 24 hour rolling period from last Template message / session message.
- If the contact responds to the Template conversation sent by Business within 24 hours of sending 1st Template message, then 24 hours rolling period will start from the Contact responding time & after that Business can sent unlimited session messages to contact within 24 hours from the contact sends the message in 24 hours rolling period.
- Activation of Session Message option/ Template message option to be incorporated in conversation page with one contact as per 24 hours rolling period.
- Pricing will be chargeable if the Business sends a MARKETING category Template 1st at 1:30 PM. But again at 2:30 PM, another category (Utility / Authorization) Template message sent to WhatsApp contact. Then another Template message charge will be

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applied & 24 hour rolling period will be started from 2:30 PM. But again at 2:30 PM, Business sends MARKETING template (within 24 hours), zero charges will be applied & time will be updated.

- Before business sending messages to contacts, it should calculate the available messaging limit & TPS limit (**50 messages / second**) & divided with 24 hours rolling period.
- Meta will automatically verify the contents of the messages & increase the messaging limit.
- If the business is verified, 1000 unique contact messages will be sent by the business within 24 hour rolling period for 7 days continuously.
- Then, Meta will increase the limit to 10000 unique contact numbers in 24 hours rolling period. After that Meta will increase the limit to 1 Lakhs if the Business sends the message for 7 Days. After that Meta will increase the limit to unlimited messages in 24 hours rolling period.
- There is no rate limit is available for calling 360 Dialog API to send messages. It only depends on the Webhook response time (200 mili seconds, the webhook must respond else, it will be queued).
- Service Conversation calculation need to be done within 24 hours rolling period along with 1000 free conversations / monthly.

Reference Links

<https://docs.360dialog.com/partner/messaging/before-sending-a-message#capacity>

<https://docs.360dialog.com/partner/messaging/before-sending-a-message/checklist-for-message-broadcasts-and-campaigns#if-the-waba-is-registered-with-on-premise-api>

<https://docs.360dialog.com/docs/waba-management/capacity-quality-rating-and-messaging-limits#messaging>

<https://developers.facebook.com/docs/whatsapp/cloud-api/overview/>

<https://developers.facebook.com/docs/whatsapp/messaging-limits>