

# SendGrid Export Integration

SendGrid is a cloud-based SMTP provider that allows you to send email without having to maintain email servers. With the Treasure Data integration, you can easily export profile segments to Sendgrid for all of your marketing email campaigns.

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## Prerequisites

- Basic Knowledge of Treasure Data.
- Knowledge of Sendgrid JSON email template.

## Requirements and Limitations

There are several rate limitations and restrictions when using the Sendgrid connector features: **Mail Send** and **Send Test Marketing Mail**.

- The total size of your email, including attachments, must be less than 30MB.
- The total number of recipients must no more than 1000. This includes all recipients defined within the `to`, `cc`, and `bcc` parameters, across each object that you include in the `personalizations` array.
- The total length of custom arguments must be less than 10000 bytes.
- Unicode encoding is not supported for the `from` field.
- The `to.name`, `cc.name`, and `bcc.name` personalizations cannot include either the `;` or `,` characters.
- For substitution, NULL values are truncated to "" (empty string). If the substitution is for a numeric column, it is converted to a string.
- Because the messages are sent in a batch, we will not revert the whole session. The error messages are logged to the console, but the job will continue.
- You **MUST HAVE** strong knowledge of the Sendgrid JSON email template.
- In **Mail Send** operation:
  - **Template ID** overrides the **substitution** defined in the Personalization Body.
  - **Skip invalid records** only applied for invalid personalization body.
- In **Send Test Marketing Mail** operation:
  - Should only input **Unsubscribe URL** or **Suppression group ID**.
  - **Skip invalid records** applied for invalid emails.

## Obtain the Sendgrid API Key

To establish the connection to the Sendgrid application you must have an API key.

Your application, mail client, or website can all use API (Application Programming Interface) keys to authenticate access to SendGrid services. We suggest that you use API keys for connecting to all of SendGrid's services. They are the preferred alternative to using a username and password because an API key can be revoked at any time without having to change your username and password.

Sendgrid API keys include the following:

- **Full Access** allows the API key to access GET, PATCH, PUT, DELETE and POST endpoints for all parts of your account, excluding billing and Email Address Validation.
- **Restricted Access** customizes levels of access for all parts of your account, excluding billing and Email Address Validation.
- **Billing Access** allows the API key to access billing endpoints for the account.

Within Sendgrid:

1. Navigate to **Settings** on the left navigation bar.
2. Select **API Keys**.
3. Copy or write down the value of the API key that you need to use for the connection to Treasure Data.

## Use the TD Console to Create Your Connection

### Create a New Connection

In Treasure Data, you must create and configure the data connection before running your query. As part of the data connection, you provide authentication to access the integration.

1. Open **TD Console**.
2. Navigate to **Integrations Hub > Catalog**.

Output Beta



Sendgrid

3. Search for and select Sendgrid.
4. Type the credentials to authenticate.

#### New Authentication

Sendgrid



1 Credentials > 2 Details

API Key:

[Learn more](#)

[Continue](#)

## Edit Authentication

an\_sendgrid\_auth



✓ Credentials > 2 Details

Name

an\_sendgrid\_auth

Back

Done

5. Type a name for your connection.
6. Select **Done**.

## Define your Query

1. Complete the instructions in [Creating a Destination Integration](#).
2. Navigate to **Data Workbench > Queries**.
3. Select a query for which you would like to export data.
4. Run the query to validate the result set.
5. Select **Export Results**.
6. Select an existing integration authentication.

### Choose Integration



Use Existing Integration

Search...

00\_2977\_box\_connection\_1 box

00\_297\_box\_connection\_2 box

00\_mailpublisher\_shirai mail\_publisher\_smart

7. Define any additional Export Results details. In your export integration content review the integration parameters. For example, your Export Results screen might be different, or you might not have additional details to fill out:

### Export Results



Lookup Field:

Name of field for dedup (default to email)

Retry Limit:

3

Retry Initial wait in  
Milliseconds:

1000

Retry Max wait in  
milliseconds:

30000

Max http waiting time in  
milliseconds:

3000000

Max upload chunk size (in  
bytes):

10000000

Batch max wait in

3600000

Back

Done

8. Select **Done**.
9. Run your query.
10. Validate that your data moved to the destination you specified.

# Integration Parameters for Sendgrid

## Export Results



Integration: jean\_sendgrid\_test1

Action:

From Email:

From Name:

Personalized Email Body:

Input configured email template. Use \_\_column\_name\_\_ to mark a substitute column/alias. All Substitute columns/aliases must be in the exported data

Content:

## Export Results



### Integration: viet\_send1

Action:

From Email:

Column Name to Send To:   
Input the column name of the recipient from the exported query result

Template ID:

Unsubscribe Url:

Suppression Group ID:

Parameter	Req. or Optional	Description
Action	Required	<ul style="list-style-type: none"> <li>Send Mail</li> <li>Send Test Marketing Mail</li> </ul>
From Email	Required	Type an email value in the format: <code>&lt;name&gt;@&lt;domain&gt;</code>
From Name	optional	
Column Name to Send	Required	For Send Test Marketing Mail. Input the column name of the recipient from the exported query result

Personalized Email Body	Required	Input configured email template. Use <code>__column_name__</code> to mark a substitute column/alias. All Substitute columns/aliases must be in the exported data.  For example:  <pre>{ "personalizations" : [{"to": [{"email": "__email__"}], "subject": "subject test __email__", "substitutions": {"--name--": "meg"}}]}</pre>
Content	Required	For example:  <pre>{ "content": [   {     "type": "text/plain",     "value": "content root --name--"   } ]}</pre>
Number of Recipients per API Call	Required	For each request call to Sendgrid, the connector will build the personalizations body up to this number  Min: 1, Max: 1000, default: 1000  Example with Export SQL query return 50,000 records. And with default config 1000, the connector will send 50 requests to Sendgrid, with 1000 personalizations per request
Attachments	optional	JSON String
Template ID	optional	Optional for Send Mail. If specified, this template ID will override the Substitutions in the Personalized email body.
	Required	Required for Send Test Marketing Mail.
Unsubscribe Group ID		You can give your recipients more control over the types of emails they want to receive by letting them opt out of messages from a certain group.
Unsubscribe Url	optional	
Suppression Group ID	optional	The method used to specify an unsubscribe group.
Mail Settings	optional	JSON string
Tracking Settings	optional	JSON string

## Example Query

```
select to_email as email from email_2_records
```

## Optionally Schedule the Query Export Jobs

You can use Scheduled Jobs with Result Export to periodically write the output result to a target destination that you specify.

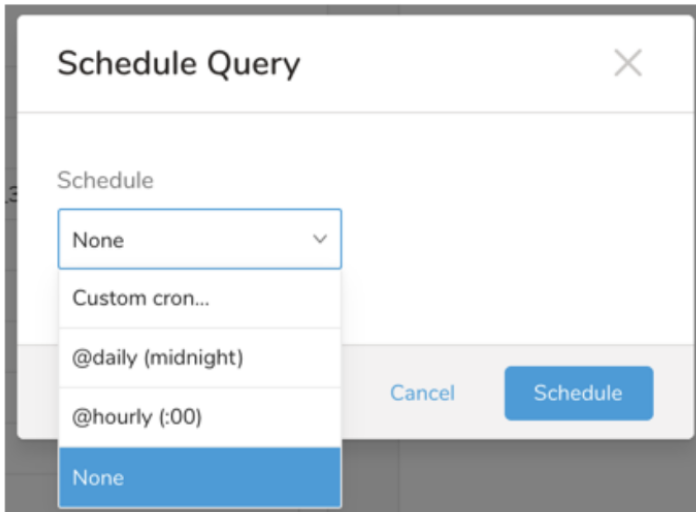
Navigate to **Data Workbench > Queries**.

Create a new query or select an existing query.

Next to **Schedule**, select None.

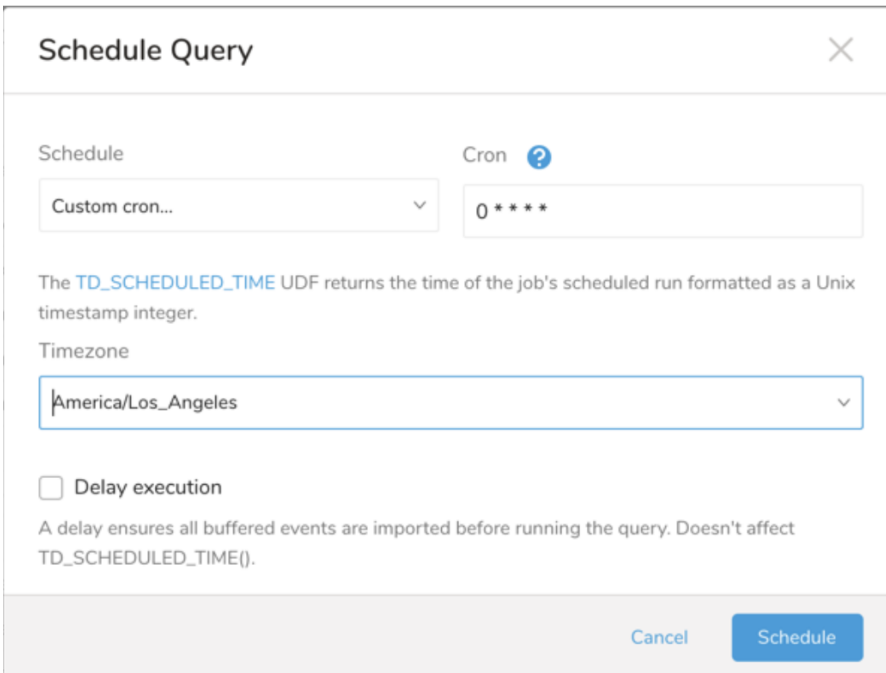
Schedule: **None**

In the drop-down, select one of the following schedule options:



Drop-down Value	Description
Custom cron...	Review <a href="#">Custom cron... details</a> .
@daily (midnight)	Run once a day at midnight (00:00 am) in the specified time zone.
@hourly (:00)	Run every hour at 00 minutes.
None	No schedule.

### Custom cron... Details



Cron Value	Description
0 * * * *	Run once an hour.
0 0 * * *	Run once a day at midnight.
0 0 1 * *	Run once a month at midnight on the morning of the first day of the month.
""	Create a job that has no scheduled run time.

*	*	*	*	*
-	-	-	-	-
				+----- day of week (0 - 6) (Sunday=0)
			+-----	month (1 - 12)
		+-----		day of month (1 - 31)
	+-----			hour (0 - 23)
+-----				min (0 - 59)

The following named entries can be used:

- Day of Week: sun, mon, tue, wed, thu, fri, sat.
- Month: jan, feb, mar, apr, may, jun, jul, aug, sep, oct, nov, dec.


A single space is required between each field. The values for each field can be composed of:

Field Value	Example	Example Description
A single value, within the limits displayed above for each field.		
A wildcard '*' to indicate no restriction based on the field.	`0 0 1 * *'	Configures the schedule to run at midnight (00:00) on the first day of each month.
A range '2-5', indicating the range of accepted values for the field.	`0 0 1- 10 * *'	Configures the schedule to run at midnight (00:00) on the first 10 days of each month.
A list of comma-separated values '2,3,4,5', indicating the list of accepted values for the field.	0 0 1,11,21 * *'	Configures the schedule to run at midnight (00:00) every 1st, 11th, and 21st day of each month.
A periodicity indicator '*/5' to express how often based on the field's valid range of values a schedule is allowed to run.	`30 */2 1 * *'	Configures the schedule to run on the 1st of every month, every 2 hours starting at 00:30. `0 0 */5 * *' configures the schedule to run at midnight (00:00) every 5 days starting on the 5th of each month.
A comma-separated list of any of the above except the '*' wildcard is also supported '2,*/5,8-10'.	`0 0 5,* /10,25 * *'	Configures the schedule to run at midnight (00:00) every 5th, 10th, 20th, and 25th day of each month.

(Optional) You can delay the start time of a query by enabling the Delay execution.

### Execute the Query

Save the query with a name and run, or just run the query. Upon successful completion of the query, the query result is automatically imported to the specified container destination.

 Scheduled jobs that continuously fail due to configuration errors may be disabled on the system side after several notifications.

### Optionally Configure Export Results in Workflow

Within Treasure Workflow, you can specify the use of this data connector to export data.

Learn more at [Using Workflows to Export Data with the TD Toolbelt](#).

### Example Workflow for Sendgrid

sendgrifd\_marketing\_test\_mail.dig

```
_export:
  td:
    database: sendgrid_db

+sendgrid_send_mail_task:
  td>: marketing_test_mail.sql
  database: ${td.database}
  result_connection: meg_sendgrid_auth
  result_settings:
    type: sendgrid
    action: send_mail
    from_email: test@treasure-data.com
  from_name: lee
  personalized_template: |
    {
      "personalizations": [{
        "to": [{
          "email": "__email__"
        }],
        "subject": "Subject in personalization __email__",
        "substitutions": {
          "--name--": "substitution value"
        }
      }]
    }
  content: |
    {"content": [
    {
      "type": "text/plain",
      "value": "Hello --name--"
    }
    ]}
  batch_size: 1000
  unsubscribe_group_id: null
  attachment: null
  mail_settings: null
  tracking_settings: null

#for send_test_marketing_mail
  type: sendgrid
  action: send_test_marketing_mail
  from_email: meg+sendgrid@treasure-data.com
  from_name: lee
  receiver_column_name: email
  template_id_send_testing: d-d86cc2d8bxx4400e903adf052e53d55a
  unsubscribe_url: null
  suppression_group_id: null
```



