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- Managing PII (personally identifiable information) by blocking fields from reaching certain destinations
- Controlling event volume by sampling or dropping unnecessary events for specific destinations
- Increasing data relevance in your destinations by removing unused or unwanted data
- Preventing test or internally-generated events from reaching your production tools

Limitations

Keep the following limitations in mind when you use destination filters:

- Destination Filters aren't applied to events sent through the Event Tester.
- Segment applies destination filters in the following order: Sample, Drop ('Only Sends' are Drops), Drop Properties, Allow Properties.
- You can't apply destination filters to Warehouses or S3 destinations.
- Each filter can only apply to one source-destination pair.
- *(For device-mode)* Destination filters don't apply to items that are added to the payload server-side such as IP addresses.

(For device-mode) Destination filters don't filter on native events that the destination SDK collects. Instead, you can use the load option to conditionally load relevant bundled JavaScript on the page. See the docs for [load options](#).

(For device-mode) Destination filters don't filter some fields that are collected by the destination SDK outside of Segment such as `page.url` and `page.referrer`.

(For web device-mode) Destination filters for web device-mode only supports the Analytics.js 2.0 source. You need to enable device mode destination filters for your Analytics.js source. To do this, go to your Javascript source and navigate to **Settings > Analytics.js** and turn the toggle on for **Destination Filters**.

(For web device-mode) Destination filters for device-mode only supports the Analytics.js 2.0 source.

(For iOS and Android mobile device-mode) Destination filters aren't supported. Segment's Swift, Kotlin and React Native libraries do support device-mode destination filters.

(For Kotlin, Swift, and React Native device-mode) You must enable the filters for your source. To do this, go to your source and navigate to **Settings > Advanced** and turn on the toggle for **Destination Filters**. After you've done that, you'll still need to add the Destination Filters plugin to your application. Instructions for this can be found [here](#):

[Kotlin](#)

[Swift](#)

[React Native](#)

Destination Filters don't apply to events that send through the destination Event Tester.

[Contact Segment](#) if these limitations impact your use case.

Create a destination filter

To create a destination filter:

- 1 Go to **Connections > Destinations** and select your destination.
- 2 Click on the **Filters** tab of your destination.
- 3 Click **+ New Filter**.
- 4 Configure the rules for your filter.
- 5 *(Optional)* Click **Load Sample Event** to see if the event passes through your filter.
- 6 Click **Next Step**.
- 7 Name your filter (max. 64 length) and click the toggle to enable it.
- 8 Click **Save**.



Enable destination filters for Analytics.js sources

If you are currently using Analytics.js as your source and want to apply filters to device-mode destinations, you need to enable device mode destination filters for your Analytics.js source. To do this, go to your Javascript source, navigate to Settings > Analytics.js, and turn on the toggle for **Destination Filters**. This will ensure the filters are effectively applied to device-mode destinations.

Destination filters API

The destination filters API provides more power than Segment's dashboard destination filters settings. With the API, you can create complex filters that are conditionally applied using Segment's [Filter Query Language \(FQL\)](#).

The destination filters API offers four different filter types:

FILTER	DETAILS
drop_event	Doesn't send matched events to the destination.
sample_event	Sends only a percentage of events through to the destination.
whitelist_fields	Only sends whitelisted properties to the destination.
blocklist_fields	Doesn't send blocklisted properties to the destination.

To learn more, read Segment's [Destination Filters API docs](#).

Examples

The following examples illustrate common destinations filters use cases:

- [PII management](#)
- [Control event volume](#)
- [Cleaner data](#)
- [Remove internal and test events from production tools](#)
- [Sample a percentage of events](#)
- [Drop events](#)
- [Only send events with userId](#)
- [Remove userId from payload](#)

PII management

Example: Remove email addresses from `context` and `properties`:

Property-level allowlisting is available with Segment's API. Using destination filters, you can configure a rule that removes email addresses from `context` and `properties`. As a result, Segment only sends traits without PII to the destination.

Configure Rules

Do Not Send Field(s) context.email, traits.email to Slack at all.

+ Add Condition

This event will be partially sent to Slack.

Test Event

Load Another Event

```
1 {
2   "anonymousId": "4f9390ae-2657-4fe1-9d95-735bde8ee6a9",
3   "context": {
4     "ip": "13.54.169.48",
5     "library": {
6       "name": "analytics.js",
7       "version": "3.7.2"
8     },
9     "page": {
10      "path": "/workspaces",
11      "referrer": "https://app.segment.com/login",
12      "search": "",
13      "title": "Segment",
14      "url": "https://app.segment.com/workspaces"
15    },
16     "traits": {
17       "crossDomainId": "df3a47ee-bcc9-479d-addb-dc1239e5cb1b"
18     },
19     "userAgent": "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML
20   },
21   "integrations": {
22   },
23   "messageId": "ajs-33ffc2ac0a550e8f053789c745bc31f6",
24   "originalTimestamp": "2019-05-10T00:56:50.054Z",
25   "receivedAt": "2019-05-10T00:56:50.126Z",
26   "sentAt": "2019-05-10T00:56:50.056Z",
27   "timestamp": "2019-05-10T00:56:50.124Z",
28   "traits": {
29     "email": "lauren@segment.com",
30     "name": "Lauren Reeder"
31   },
32   "type": "identify",
33   "userId": "0sY6MFBj1K"
34 }
```

Next Step →

**Healthcare and Life Sciences (HLS) customers can encrypt data flowing into their destinations**

HLS customers with a HIPAA eligible workspace can encrypt data in fields marked as Yellow in the Privacy Portal before they flow into an event stream, cloud-mode destination.

To learn more about data encryption, see the [HIPAA Eligible Segment documentation](#).

Control event volume

This example shows a filter that controls event volume by only sending User Signed Up and Demo Requested events.

Configure Rules

Only Send Event to Slack if...

Any the following conditions are true

Event Name is (string) User Signed Up

x

or

Event Name is (string) Demo Requested

x

+ Add Condition

✓ This event will be sent to Slack.

Test Event

Load Another Event

```
1 {
2   "anonymousId": "d723239a-0a68-4395-a4f1-673f98e8219a",
3   "context": {
4     "ip": "34.209.47.248",
5     "library": {
6       "name": "analytics.js",
7       "version": "3.7.2"
8     },
9     "traits": {
10      "crossDomainId": "7ff14488-e08e-4c70-aea1-fdfd30da1765"
11    },
12     "typewriter": {
13       "name": "gen-js",
14       "version": "6.1.3"
15     },
16     "userAgent": "Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML
17   },
18   "event": "User Signed Up",
19   "messageId": "ajs-220c74a843cf77518a3e8897d66bf007",
20   "originalTimestamp": "2019-05-10T01:01:03.694Z",
21   "properties": {
22     "email": "Lauren@segment.com",
23     "name": "Lauren Reeder"
24   },
25   "receivedAt": "2019-05-10T01:01:03.700Z",
26   "sentAt": "2019-05-10T01:01:03.700Z",
27   "timestamp": "2019-05-10T01:01:03.694Z",
28   "type": "track",
29   "userId": "yYyKEDLgsx"
30 }
```

Next Step →

Cleaner data

This example shows a rule that only sends track calls to Google Analytics.

Cancel

Configure Rules

Only Send Event to Google Analytics if...

All the following conditions are true

Event Type is track

x

+ Add Condition

✓ This event will be sent to Google Analytics.

Test Event

Load Another Event

```
1 {
2   "anonymousId": "894e0745-669e-4bbd-a6c2-8bb33d01e920",
3   "context": {
4     "ip": "151.119.216.178",
5     "library": {
6       "name": "analytics-python",
7       "version": "1.2.9"
8     },
9     "protocols": {
10      "omitted": [
11        "brand",
12        "position",
13        "operating_system",
14        "price",
15        "category",
16        "model",
17        "value",
18        "product_id",
19        "quantity",
20        "currency"
21      ]
22    },
23   },
24   "event": "Cart Viewed",
25   "integrations": {
26     "messageId": "df8f7a7d-2304-482e-b134-2598380872e7",
27     "originalTimestamp": "2019-05-07T09:29:09+00:00",
28     "properties": {
29       "app_version": "3.0.1"
30     },
31     "receivedAt": "2019-05-08T00:00:15.238Z",
32     "sentAt": "2019-05-08T00:00:15.221Z",
33     "timestamp": "2019-05-07T09:29:09+016Z",
34     "type": "track",
35     "userId": "7552871129"
36   }
37 }
```

Next Step →

Remove internal and test events from production tools

In the example below, the rule targets email addresses with internal domains to stop test events from reaching Destinations.

Slack receiving from App / Custom Filter

1 Configure Rules 2 Name & Save

Configure Rules

Do Not Send Event

to Slack if...

All

the following conditions are true

Event Field

traits.email

contains

@segment.com

X

+ Add Condition

This event will not be sent to Slack.

Test Event

Load Another Event

```
1 {
2   "anonymousId": "ddf9ecda-977b-4231-b000-c52e3341f82a",
3   "context": {
4     "ip": "210.13.208.146",
5     "library": {
6       "name": "analytics.js",
7       "version": "3.7.2"
8     },
9     "page": {
10      "referrer": "",
11      "search": "",
12      "title": "Segment"
13    },
14    "traits": {
15      "crossDomainId": "95cbdd72-fc67-4b43-b90e-6ac30f7a6e83"
16    },
17    "userAgent": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_12_0) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/56.0.2876.76 Safari/537.36"
18  },
19  "integrations": {
20  },
21  "messageId": "ajs-7b8270771eb2f1f8a87eed5ddcda0397",
22  "originalTimestamp": "2019-05-10T01:03:48.139Z",
23  "receivedAt": "2019-05-10T01:03:48.247Z",
24  "sentAt": "2019-05-10T01:03:48.144Z",
25  "timestamp": "2019-05-10T01:03:48.242Z",
26  "traits": {
27    "created": "2016-01-12T02:24:06.400Z",
28    "email": "Lauren@segment.com",
29    "name": "Lauren Reeder"
30  },
31  "type": "identify",
32  "userId": "bgrqbddmJ"
33 }
```

Next Step →

In the example below, the rule prevents an event from sending if `order Completed` and `properties.email` contain an internal `@segment.com` email address.

Do Not Send Event

to Slack if...

All

the following conditions are true

Event Name

is (string)

Order Completed

×

and

Event Field

properties.email

contains

@segment.com

×

+ Add Condition

⛔ This event will not be sent to Slack.

Test Event

↻ Load Another Event

```

1 {
2   "anonymousId": "d2e77820-a48b-4b2b-882a-3f4917a24081",
3   "context": {
4     "campaign": {
5       },
6     "ip": "45.250.160.82",
7     "library": {
8       "name": "analytics.js",
9       "version": "3.7.2"
10    },
11    "traits": {
12      "crossDomainId": "1e3eedd9-28c4-428c-ad87-8fa01aeeed198"
13    },
14    "typewriter": {
15      "name": "gen-js",
16      "version": "6.1.3"
17    },
18    "userAgent": "Mozilla/5.0 (Macintosh; Intel Mac OS X 10_13_4) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/68.0.3440.106 Safari/537.36"
19  },
20   "event": "Order Completed",
21   "messageId": "ajs-6085013e159ac3a92a0494db68f017a7",
22   "originalTimestamp": "2019-05-10T01:06:26.391Z",
23   "properties": {
24     "email": "Lauren@segment.com",
25     "name": "Lauren Reeder"
26   },
27   "receivedAt": "2019-05-10T01:06:30.221Z",
28   "sentAt": "2019-05-10T01:06:26.401Z",
29   "timestamp": "2019-05-10T01:06:30.211Z",
30   "type": "track",
31   "userId": "hXtcAlook6"
32 }

```

Next Step →

Sample a percentage of events

Using the [destination filters API](#), you can create a rule to randomly sample video heartbeat events.

Drop events

Watch this [destination filters walkthrough](#) to learn how to use event names to filter events sent to destinations.

Only send events with userId

Use the [Public API](#) to only send events to your destination if they contain a `userId`. Here's an example of how you might format this request:

```

{
  "sourceId": "<SOURCE_ID>",
  "destinationId": "<DESTIANTION_ID>",
  "title": "Don't send event if userId is null",
  "description": "Drop event if there is no userId on the request",
  "if": "length( userId ) < 1",
  "actions": [
    {
      "type": "DROP"
    }
  ],
  "enabled": true
}

```

Remove userId from payload

There are certain destinations to which you may not want to send the `userId`. To accomplish this, you can use the [Public API](#) to create a Filter that will target and remove the `userId` (or any other top-level field) like this:

```
{
  "sourceId": "<sourceId>",
  "destinationId": "<destinationId>",
  "title": "Don't send userId at all",
  "description": "Drop userId on all requests",
  "if": "all",
  "actions": [
    {
      "type": "DROP_PROPERTIES",
      "fields": {
        "":["userId"]
      }
    }
  ],
  "enabled": true
}
```

Filter conditional operators

- contains: checks whether the field's value includes the provided substring
- glob matches: case sensitive, can accept wildcard characters, checks whether the value matches provided string
- is (number): checks whether the value is exactly the provided integer
- is (string): checks whether the value is exactly the provided string
- is false: checks whether the value is type boolean and is false
- is not (number): checks whether the value isn't exactly the provided integer
- is not (string): checks whether the value isn't exactly the provided string
- is not null: checks that the existing field does not have a null value
- is null: check that the existing field has a null value
- is true: checks whether the value is type boolean and is true

Important notes

Conflicting settings

Some destinations offer settings that also allow you to filter data. For example, the Facebook App Events destination allows you to map screen events to Track events. Because destination filters are evaluated and applied *before* the destination settings are applied, they can conflict with your settings.

For example, if you have a destination filter that filters Track events *and* you have the **Use Screen Events as Track Events** setting enabled, Track events drop, but screen events still process. The destination settings transform it into a Track event - *after* the filters.

Error handling

Segment makes effort to ensure that destination filters can handle unexpected situations. For example, if you use the `contains()` FQL function on the `null` field, Segment returns `false` instead of returning an error. If Segment can't infer your intent, Segment logs an internal error and drops the event. Segment defaults to this behavior to prevent sensitive information, like a PII filter, from getting through.

Errors aren't exposed in your Destination's Event Deliverability tab. For help diagnosing missing destination filter events, [contact Segment](#).

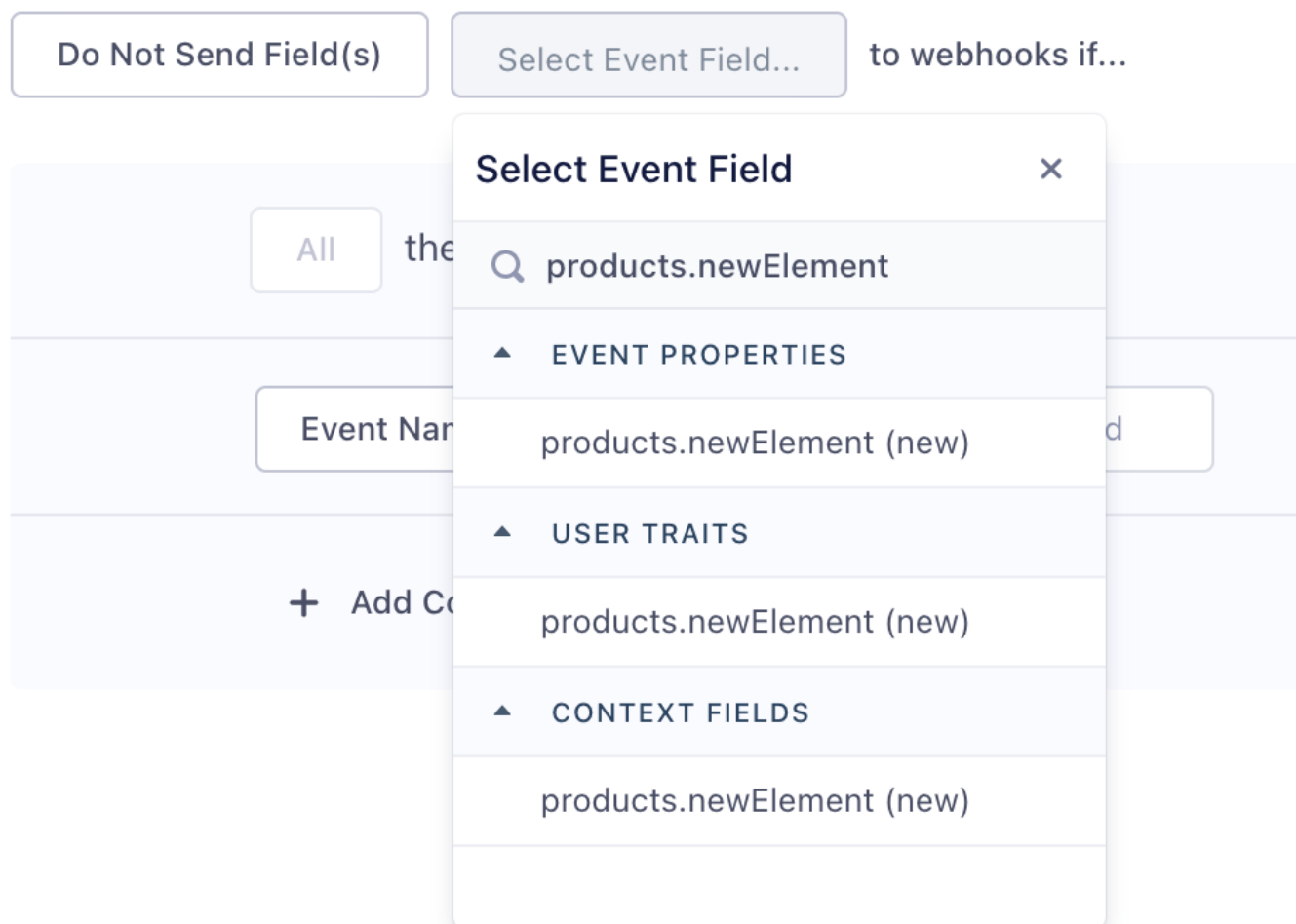
FAQs

How do destination filters work with array properties?

Destination filters can filter properties out of objects nested in an array. For example, you can filter out the `price`

property of every object in an array at `properties.products`. You can also filter out an entire array from the payload. However, you can't drop nested objects in an array or filter properties out of a single object in an array. To block a specific property from all of the objects within a properties array, set the filter using the following the format: `<propertyType>.<arrayName>.<arrayElementLabel>` .

For example, the `properties.products.newElement` filter blocks all `newElement` property fields from each `products` object of an array within the `properties` object of a Track event.



To block the Identify event trait `products.newElement`, select the option under the **User Traits** list instead. To block the context object field `products.newElement`, select it from the **Context Fields** list.

How many filters can I create?

Segment supports 10 filters per destination. If you need help consolidating filters or would like to discuss your use case, [contact Segment](#).

Can I set multiple `Only Send` destination filters?

Segment evaluates multiple `Only Send` filters against each other and resolves destination filters in order. If multiple `Only Send` filters conflict with each other, Segment won't send information downstream.

How many properties can I view in the filter dropdown?

Segment displays the most recent 15,000 properties. To find a property not in the filter dropdown, enter the property manually.

How can I filter out warehouse events?

To filter out events from warehouses, use Selective Sync.

I don't see a *name* property at the top level of my events to filter on *event name*".

Generally, only Track calls have *name* properties, which correspond to the *event* field in an event.

How can I find out when new destination filters have been added or removed?

The Activity Feed shows the action, date, and user who performed the action when a destination filter is created, modified, enabled, disabled, or deleted. You can also subscribe to notifications for any of these changes in the **Activity Feed** settings page.

Why am I getting a permissions denied error when I try to save a filter?

You must have write access to save and edit filters. Read permission access only allows viewing and testing access.

How can I test my filter?

Use the destination filter tester during setup to verify that you're filtering out the right events. Filtered events show up on the schema page but aren't counted in event deliverability graphs.

Can I filter on properties/traits that have spaces in the name (for example, `properties.test event field`)?

Destination Filters can't target properties or traits with spaces in the field name. As an alternative, use [Insert Functions](#), which let you write code to take care of such filtering.

Can I use destination filters to drop events unsupported by a destination?

The check for unsupported events types happens before any destination filter checks. As a result, Destination Filters can't prevent unsupported event type errors. To filter these events, use the [Integrations Object](#).

Why do I see events sent through after I just added a destination filter?

Destination filters only filter events sent after filter setup. If you just added a destination filter but still see some events going through, you're likely seeing retries from failed events that occurred before you set up the filter.

When Segment sends an event to a destination but encounters a timeout error, it attempts to send the event again. As a result, if you add a destination filter while Segment is trying to send a failed event, these retries could filter through, since they reflect events that occurred before filter setup.

How do destination filters handle Protocols Transformations?

Source-Scoped Transformations: If destination filters are enabled, Segment processes [source scoped transformations](#) before the events reach destination filters.

Destination-Scoped Transformations: Segment processes [destination-specific transformations](#) after the events have passed through the destination filters.

Are destination filter conditions case-sensitive?

Destination filters are case-sensitive. Make sure to test your filter conditions with a test event before saving and enabling the filter.

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