

**CISCO SYSTEMS - CX CENTERS ENTERPRISE NETWORKING**

# Technote of the day (TOTD) -- How to setup & test Event Subscriptions for Email & REST endpoints?

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**CISCO SYSTEMS - CX CENTERS ENTERPRISE NETWORKING**

# HOW TO SETUP & TEST EVENT SUBSCRIPTIONS FOR EMAIL & REST ENDPOINTS?

## Objective

The objective of this document is to provide users an example of configuring Event Notification Subscriptions for Email & Rest API destinations. This is only one example of the possible configuration scenarios.

## Goals

Provide a working example of configuring and testing Event Notifications and Subscriptions using Email & Rest API destinations.

Depending on your deployment and configuration choices, your configuration setup may be different. Also, remember that in my example, I am using a Public site for my test destinations. So use caution and please refer to your Data Protection Policies before testing to public sites.

The following technote is written against the Cisco DNA Center version 2.1.1.0 Limited Release. The following technote is written to help answer the question in regards to configuring & testing the Cisco DNA Center Event Notification Feature.

## **Reference Information:**

- Cisco DNA Center version 2.1.1.0
- Webhook.site (REST API Webhook Test Site)  
<https://webhook.site/>

## CISCO SYSTEMS - CX CENTERS ENTERPRISE NETWORKING

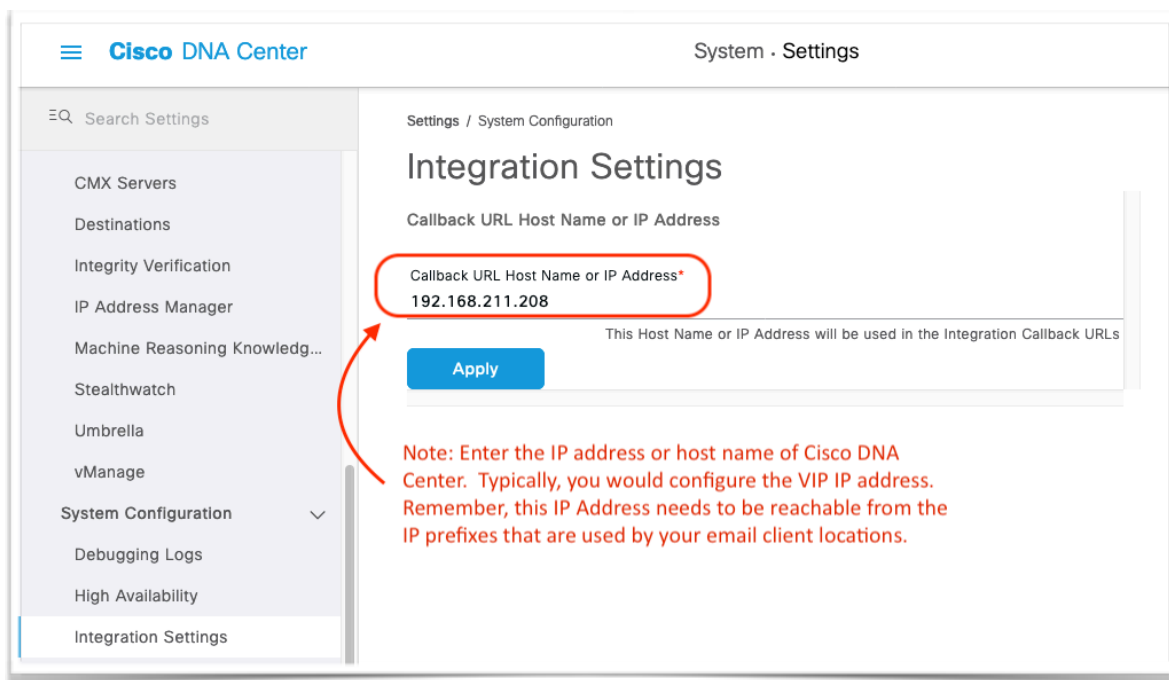
### WORK WITH EVENTS

You can subscribe to specific events that may occur in your network. After your subscription, if the event does occur you will receive a notification by email, webhook (REST API), or SNMP trap. You subscribe to an event by using the Events window in the Cisco DNA Center platform GUI. For this technote, I will only be giving an example of email & webhook (REST API). The SNMP trap method is self explanatory.

**Note:** Email notifications are near real-time and are neither batched nor scheduled, they use predefined email templates that cannot be customized by the user. Additionally, the underlying priority of the event does not affect when the notification is sent out. For example, an event with a severity of 1 is not sent out sooner than an event with a severity of 3. To prevent multiple issues being triggered, there is also a supported suppression time interval. If the same issue (event) occurs within the suppression time interval, a second notification will not be sent. If the same issue occurs outside of the suppression time interval, then another notification is sent. The issue suppression time interval is also predefined and cannot be configured by the user.

#### Before you begin...

**Important:** For the emails to have the correct Cisco DNA Center hyper-link, enter the IP address or host name of the Cisco DNA Center in the Integrations Settings window. To enter this information using the GUI, click the [Menu/Navigation Icon > System > Settings > System Configuration > Integration Settings](#).



The screenshot shows the Cisco DNA Center interface for System Settings. The left sidebar lists various settings categories, with 'Integration Settings' selected. The main content area displays the 'Integration Settings' page, specifically the 'Callback URL Host Name or IP Address' section. The input field is highlighted with a red circle and contains the IP address '192.168.211.208'. Below the input field is an 'Apply' button. A red arrow points from a note below to the input field.

**Note:** Enter the IP address or host name of Cisco DNA Center. Typically, you would configure the VIP IP address. Remember, this IP Address needs to be reachable from the IP prefixes that are used by your email client locations.

**Note:** Enter the IP address or host name of the Cisco DNA Center. Typically, you would configure the VIP IP address. Remember, this IP Address needs to be reachable from the IP prefixes that are used by your email client locations.

## CONFIGURE AN EMAIL DESTINATION

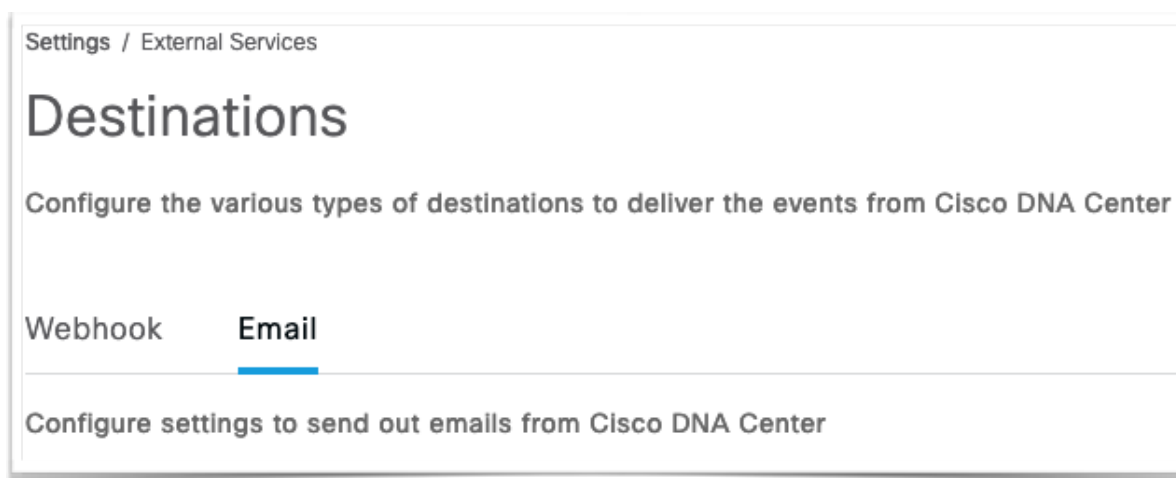
Cisco DNA Center supports email notification for both events and reports. This Technote will focus on the event notifications feature. With Cisco DNA Center version 2.1.1.0, there is a new Navigation Menu and enhancements to the layout of the System Settings UI pages. In previous Cisco DNA Center releases, there was an "Email Configuration" section. This has changed in version 2.1.1.0. The External Services "Destinations" section is where you configure the various types of destinations to deliver the events from Cisco DNA Center.

**Note:** Emails are sent out from Cisco DNA Center using the SMTP protocol. Cisco DNA Center only supports [clear text SMTP](#) for email event notifications. *If you use an email server that requires SSL/TLS support, you will not be able to receive the email event notifications.*

Perform the following steps to configure an email destination for events or reports using the Cisco DNA Center GUI.

### Step 1

In the Cisco DNA Center GUI, click the [Menu\Navigation Icon > System > Settings > External Services > Destinations > Email](#).



## Step 2

Configure the SMTP Server Configuration fields. Options include the following:

Primary SMTP Server (Required):

Hostname/IP address: (Required)	Hostname or IP address of the primary SMTP server.
Port number: (Required)	Port number of the server.
Username:	Username required to access server.
Password:	Password required to access server.
Confirm Password:	Reenter password to access server.

Settings / External Services

## Destinations

Configure the various types of destinations to deliver the events from Cisco DNA Center

Webhook **Email**

Configure settings to send out emails from Cisco DNA Center

### Primary SMTP Server

Hostname/IP*	192.168.211.213	Primary SMTP Server Address
Port*	25	Primary SMTP Server Port
Username		Username for Authenticating Primary SMTP Server
Password		Password for Authenticating Primary SMTP Server

### Step 3

(Optional) Configure the Secondary SMTP Server Configuration fields. Options include the following:

Secondary SMTP Server (optional)

Hostname/IP address:	<i>Hostname or IP address of the secondary SMTP server.</i>
Port number:	<i>Port number of the server.</i>
Username:	<i>Username required to access server.</i>
Password:	<i>Password required to access server.</i>
Confirm Password:	<i>Reenter password to access server.</i>

### Step 4

(Required) Configure the Senders and Receivers test email fields. Options include the following:

Senders and Receivers:

From: (Required)	<i>Sender of test email.</i>
To: (Required)	<i>Recipient of test email.</i>
Subject: (Required)	<i>Enter text (maximum of 200 characters) for a subject line for the test email.</i>

Sender and Receivers	
From*	
<b>netadmin@dna.local</b>	Sender's Email for Test
To*	
<b>callhome-event-notify@dna.local</b>	Receiver's Email for Test
Subject*	
<b>Cisco DNA Center - Event Notifier for Test Emails</b>	Subject of Email for Test

**Step 5**

Click Test to test the email configuration.

Once the Test button is clicked, a test email is sent using the parameters configured (for both primary and secondary SMTP Server settings with subject line as "Subject of the Email Test" that you configured. A success message ("Email Configuration is validated. Successfully sent test email!") or failure message ("PrimarySMTPConfig -> Creating Session failed due to Could not connect to SMTP host") should appear depending the test email connectivity results.



Email Configuration is validated. Successfully sent test email!



PrimarySMTPConfig -> Creating Session failed due to Could not connect to SMTP host: 192.168.211.213, port: 25

**Step 6**

Click Save to save the configuration.

Click Cancel to cancel the configuration.



Email Configuration Updated!



## CONFIGURE AN WEBHOOK DESTINATION

Cisco DNA Center supports a webhook destination for both events and reports. This Technote will focus on the event notifications feature. With Cisco DNA Center version 2.1.1.0, there is a new Navigation Menu and enhancements to the layout of the System Settings UI pages. In previous Cisco DNA Center releases, there was an "Email Configuration" section. This has changed in version 2.1.1.0. The External Services "Destinations" section is where you configure the various types of destinations to deliver the events from Cisco DNA Center.

### Before you begin...

To complete this Webhook Destination configuration procedure, you will need a target destination to send event notifications using the Webhook Rest API. For this technote, I will use an example of a Webhook Destination from the Site:

[Webhook.site](https://webhook.site) (REST API Webhook Test Site)

<https://webhook.site/>

**Note:** When you access the Webhook.site, you will be provided a unique URL and unique email address. The unique URL will be used for your Webhook Destination & REST Endpoint. The unique email address will be used for your Email Endpoint.

For Example:

<a href="#">Your Main Site</a>	<a href="https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2">https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2</a>
<a href="#">Your unique URL</a>	<a href="https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2">https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2</a>
<a href="#">Your unique email address</a>	<a href="mailto:f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site">f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site</a>

**Webhook.site** allows you to easily test, inspect, forward and create [Custom Actions](#) for any incoming HTTP request or e-mail. [What's a webhook?](#)

Any request or email sent to these addresses are logged here instantly — you don't even have to refresh!

#### Your unique URL

<https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2> [Copy to clipboard](#) [Open in new tab](#)

#### Your unique email address

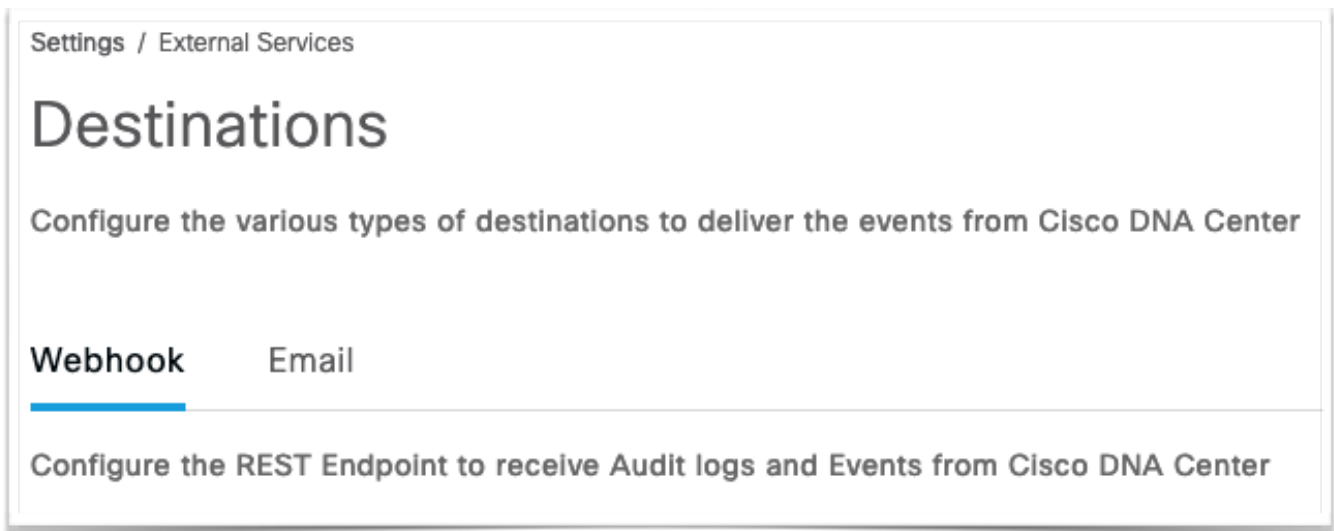
[f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site](mailto:f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site) [Copy to clipboard](#) [Open in mail client](#)



Perform the following steps to configure a webhook destination for events or reports using the Cisco DNA Center GUI.

**Step 1**

In the Cisco DNA Center GUI, click the [Menu\Navigation Icon > System > Settings > External Services > Destinations > Email](#).



## Step 2

Review the Webhook tab.

### Webhook Tab

The following fields are displayed:

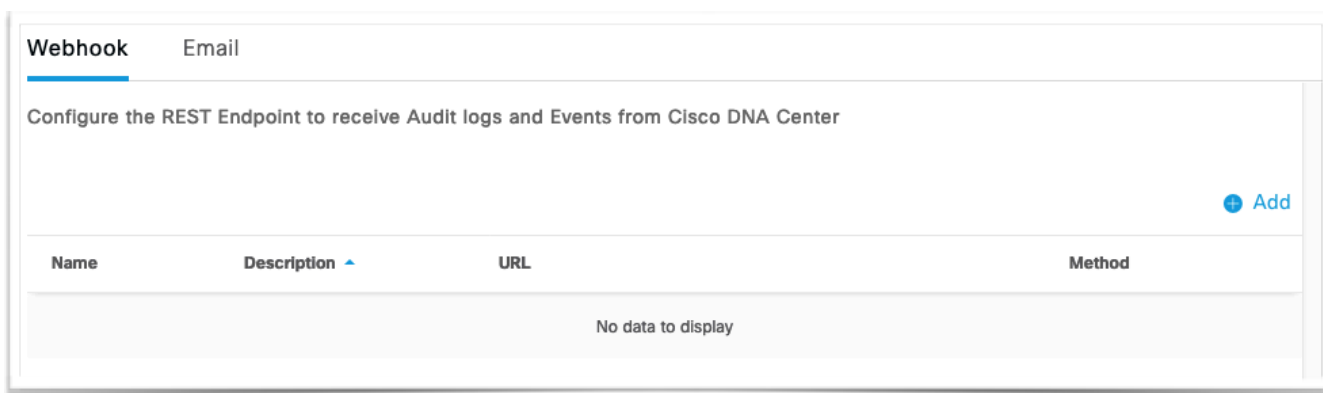
Name: *Name of the webhook.*

Description: *Description (user provided) of the webhook.*

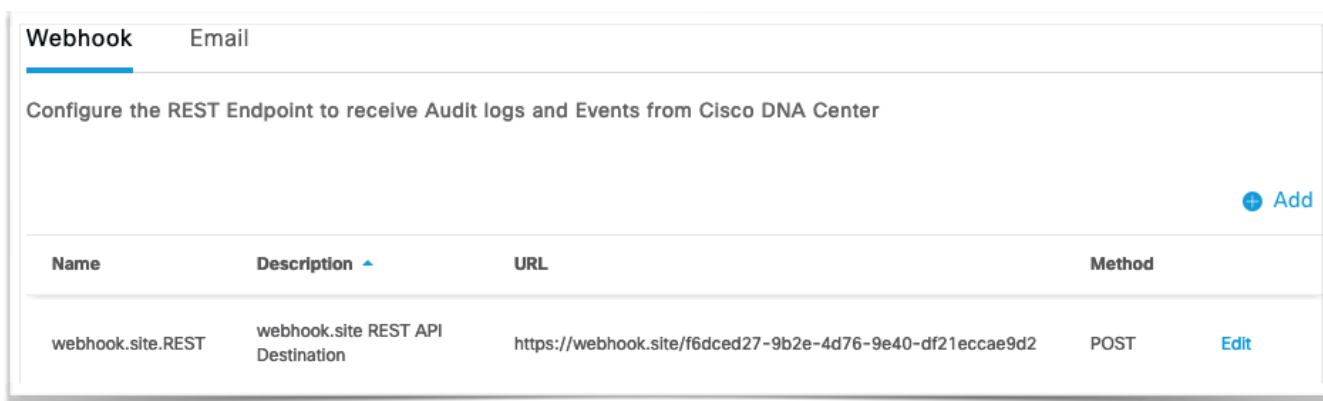
URL: *URL of webhook (callback URL).*

Method: *REST API method of webhook (POST).*

Edit: *Link that opens field to edit the configured webhook fields. After editing the webhook configuration, click Update to save your changes.*



The screenshot shows the 'Webhook' tab selected. Below the header, there is a sub-header 'Email' and a main instruction: 'Configure the REST Endpoint to receive Audit logs and Events from Cisco DNA Center'. An '+ Add' button is visible in the top right corner. Below this is a table with the following columns: Name, Description (with a dropdown arrow), URL, and Method. The table is currently empty, displaying 'No data to display' in the center.

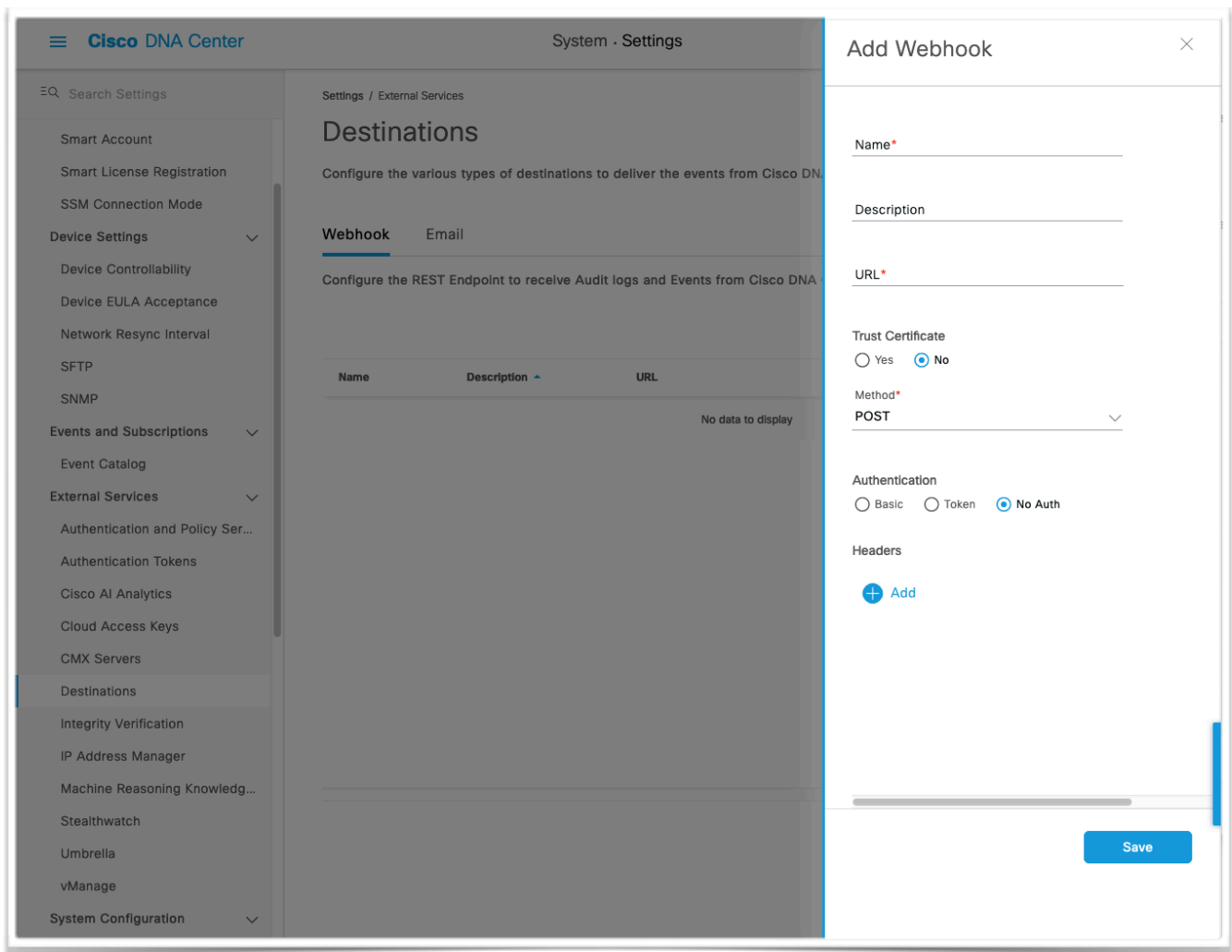


The screenshot shows the 'Webhook' tab selected. Below the header, there is a sub-header 'Email' and a main instruction: 'Configure the REST Endpoint to receive Audit logs and Events from Cisco DNA Center'. An '+ Add' button is visible in the top right corner. Below this is a table with the following columns: Name, Description (with a dropdown arrow), URL, Method, and an 'Edit' link. One row of data is present:

Name	Description	URL	Method	
webhook.site.REST	webhook.site REST API Destination	https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2	POST	<a href="#">Edit</a>

**Step 3**

Click the Add link/icon to configure a webhook.  
An Add Webhook slide-in pane opens.



#### Step 4

Enter values in the fields in the Add Webhook slide-in pane to configure the webhook.

Add Webhook

Name:	<i>Name of the webhook.</i>
Description:	<i>Description (user provided) of the webhook.</i>
URL:	<i>URL of webhook (callback URL).</i>
Method:	<i>REST API method of webhook (POST).</i>

#### Step 5

Choose whether a trust certificate is associated with the webhook URL.

Depending upon your webhook configuration, with the Trust Certificate field click Yes or No.

[For this Technote use:](#)

Trust Certificate: (NO)

#### Step 6

Choose the authentication type associated with your webhook URL.

Depending upon your webhook configuration, within the Authentication field click one of the following:

**Basic:** Authentication where the client sends HTTP requests with the Authorization header that contains the word 'Basic', followed by a space and a base64-encoded string 'username:password'. If you select Basic in the GUI, the Header Key field below enters the value Authorization.

**Token:** Authentication where users are authenticated using a security token provided by the server. If you select Token, the Header Key field below enters the value X-Auth-Token.

**No Authentication:** No authentication needed.

[For this Technote use:](#)

Authentication: (No Auth)

### Step 7

Within the Headers field, enter values for the Header Name and Header Value.  
Click Add to add the header name and value.

**Note:** The Headers field may be auto-populated depending upon your Authentication selection above.

### Step 8

Click Save to save your webhook destination configuration.

The image shows a screenshot of the 'Add Webhook' configuration form and a success message. The form is titled 'Add Webhook' and contains the following fields and options:

- Name\***: `webhook.site.REST`
- Description**: `webhook.site REST API Destination`
- URL\***: `https://webhook.site/f6dced27-9b2e-4`
- Trust Certificate**:  Yes  No
- Method\***: `POST`
- Authentication**:  Basic  Token  No Auth
- Headers**:
- Save**:

A success message is displayed in the bottom right corner, indicating that the webhook was created successfully. The message is titled 'Success' and contains the text 'Webhook created successfully'. The message also shows 'Show Records: 25' and '1 - 1'.

Settings / External Services


## Destinations

Configure the various types of destinations to deliver the events from Cisco DNA Center

**Webhook**   Email

Configure the REST Endpoint to receive Audit logs and Events from Cisco DNA Center

[+ Add](#)

Name	Description 	URL	Method	
webhook.site.REST	webhook.site REST API Destination	https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2	POST	<a href="#">Edit</a>

## CONFIGURE EVENTS AND SUBSCRIPTIONS

You can subscribe to specific events that may occur in your network. After your subscription, if the event does occur you will receive a notification by email, webhook (REST API), or SNMP trap. You subscribe to an event by using the Events window in the Cisco DNA Center platform GUI.

**NOTE:** Email notifications are near real-time and are neither batched nor scheduled, they use predefined email templates that cannot be customized by the user. Additionally, the underlying priority of the event does not affect when the notification is sent out. For example, an event with a severity of 1 is not sent out sooner than an event with a severity of 3. To prevent multiple issues being triggered, there is also a supported suppression time interval. If the same issue (event) occurs within the suppression time interval, a second notification will not be sent. If the same issue occurs outside of the suppression time interval, then another notification is sent. The issue suppression time interval is also predefined and cannot be configured by the user.

This technote will focus on the event notifications feature using Webhooks REST API and Webhooks Email destinations that were configured earlier in this technote. With Cisco DNA Center version 2.1.1.0, there is a new Navigation Menu and enhancements to the layout of the System Settings UI pages.

For this technote, I will use an example of a Webhook Destination from the Site:

[Webhook.site \(REST API Webhook Test Site\)](https://webhook.site)

<https://webhook.site/>

**Note:** When you access the Webhook.site, you will be provided a unique URL and unique email address. The unique URL will be used for your Webhook Destination & REST Endpoint. The unique email address will be used for your Email Endpoint.

For Example:

<a href="#">Your Main Site</a>	<a href="https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2">https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2</a>
<a href="#">Your unique URL</a>	<a href="https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2">https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2</a>
<a href="#">Your unique email address</a>	<a href="mailto:f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site">f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site</a>

In this configuration section

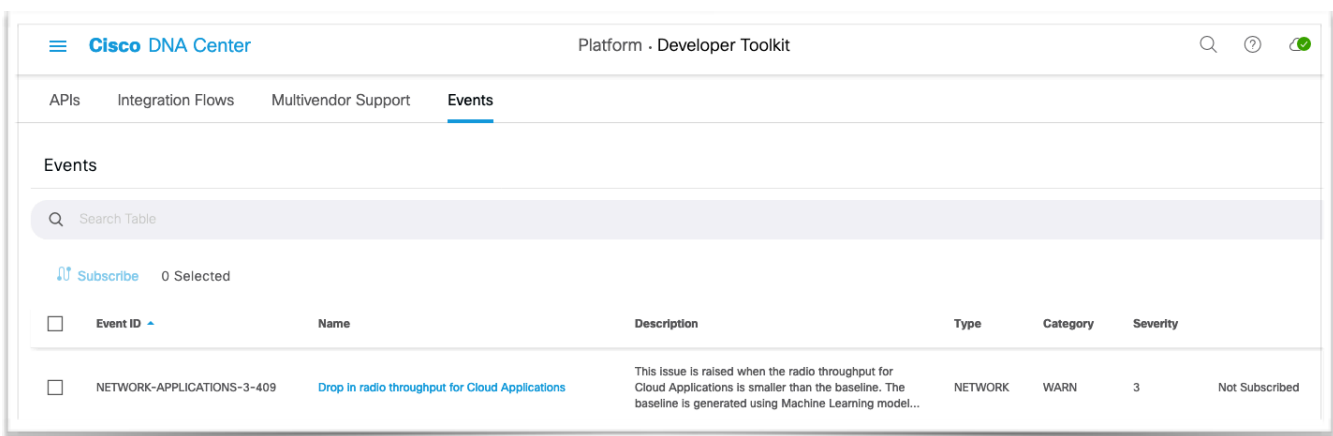
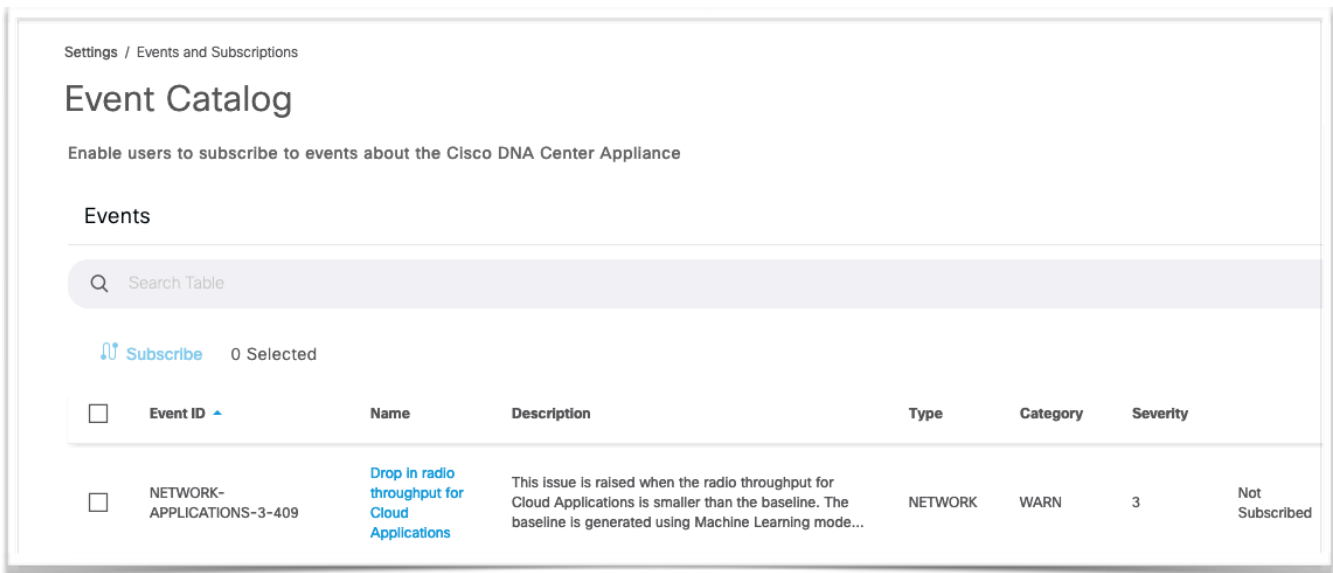
- I am going to give an example of configuring a Subscription for one selected Event.
- I will create Two Subscriptions:
  - Email Subscription
  - Webhook Rest API Subscription

**Note:** With Cisco DNA Center version 2.1.1.0, there are 77 Events that can be subscribed to. You can Select All Events and Create a Batch Subscription using the same Endpoints. Unfortunately at this time, we can not Select ALL Events and unsubscribe. You would need to delete the Configured Subscriptions one by one.

**Step 1**

In the Cisco DNA Center GUI, you have two options for configuring Event Subscriptions:

- ✓ Click the [Menu\Navigation Icon > System > Settings > Events and Subscriptions > Event Catalog](#)
- ✓ Click the [Menu\Navigation Icon > Platform > Developer Toolkit > Events](#)





## Step 2

- In the Cisco DNA Center GUI (which ever navigation option that you chose), Select the Event ID to configure.
- Click on Subscribe

Settings / Events and Subscriptions

## Event Catalog

Enable users to subscribe to events about the Cisco DNA Center Appliance

### Events

Search Table

[Subscribe](#) 1 Selected

<input type="checkbox"/>	Event ID	Name	Description	Type	Category	Severity	
<input checked="" type="checkbox"/>	NETWORK-APPLICATIONS-3-409	Drop in radio throughput for Cloud Applications	This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning mode...	NETWORK	WARN	3	Not Subscribed

## Step 3

In the Subscribe configuration window, you will need to configure the Subscription Details.

### SUBSCRIPTION DETAILS

Name

Subscription Type

Subscription Endpoint

**Note:** There are specific Parameters that are specified for each Subscription Type. We will configure these for Subscription Types REST & EMAIL.

**Subscription #1 for EVENT\_ID**

Name NETWORK-APPLICATIONS-3-409 -- REST  
Subscription Type REST  
Subscription Endpoint Select an existing instance  
webhook.site.REST

The screenshot shows a 'Subscribe' form with a header '1 Event selected'. The form contains the following fields:

- SUBSCRIPTION DETAILS**
- Name\*: NETWORK-APPLICATIONS-3-409 -- REST
- Subscription Type: REST (dropdown menu)
- Text: Select an existing instance. Or Click [here](#) to create a new instance.
- Subscription Endpoint: webhook.site.REST (dropdown menu)
- URL: (empty field)

**Note:** Once you select the webhook.site.REST endpoint, *the rest of the fields will autofill.*

## Subscribe

1 Event selected

### SUBSCRIPTION DETAILS

Name\*  
WORK-APPLICATIONS-3-409 -- REST

Subscription Type  
REST

Select an existing instance. Or Click [here](#) to create a new instance.

Subscription Endpoint  
webhook.site.REST

URL  
https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2

Trust Certificate  
 Yes  No


HTTP Method  
POST

Authentication  
 Basic  Token  No Auth

Headers  
NA


[Cancel](#) [Subscribe](#)


- Click Subscribe



## Success

Subscription Created



<input checked="" type="checkbox"/>	NETWORK-APPLICATIONS-3-409	<a href="#">Drop In radio throughput for Cloud Applications</a>	This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning mode...	NETWORK	WARN	3	 <a href="#">Subscribed (1)</a>
-------------------------------------	----------------------------	---	--	---------	------	---	--

### Step 4

Once the Subscription has been successfully created, you can test the subscription using the "Try It" option for the current subscriptions

In the Event Catalog window:

- Select the Event ID that has the subscription that you just added.
- Click Subscribed hyperlink in the last column the for the selected Event ID.
- Select the "Active Subscriptions" Tab and expand the configured Subscriptions to view the configured Broadcast Methods.
- Open another browser to your webhook site  
ie. <https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2>
- Click "Try It"
- Click "Publish" from the Notification Window
- View the Output on the Notification Window and the webhook site

<input checked="" type="checkbox"/>	NETWORK-APPLICATIONS-3-409	<a href="#">Drop in radio throughput for Cloud Applications</a>	This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning mode...	NETWORK	WARN	3	<span style="color: green;">●</span> <a href="#">Subscribed (1)</a>
-------------------------------------	----------------------------	---	--	---------	------	---	---

### Drop in radio throughput for Cloud Applications

Event Details
Active Subscriptions
✕

Active Subscriptions (1)

Broadcast Methods	Count and Instances	Actions
REST	∨ 1	
NETWORK-APPLICATIONS-3-409 -- REST		<a href="#">Unsubscribe</a>   <a href="#">Edit</a>

Cancel
Subscribe
Try It

### Notification

**Event Name**  
Drop in radio throughput for Cloud Applications

**Event Id**  
NETWORK-APPLICATIONS-3-409

Instance Id  
af4e7e0e-3e0e-48de-825d-3dee58cfa2

Name  
Drop in radio throughput for Cloud Applic

Description  
This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning models built for this network.

Namespace  
ASSURANCE

Context  
EXTERNAL

Source  
EXTERNAL

Type  
NETWORK

Category  
WARN

Severity  
3

Domain  
Connectivity

Sub Domain  
Wireless

Details

1 {}

Cancel Publish

### Notification

**Event Name**  
Drop in radio throughput for Cloud Applications

**Event Id**  
NETWORK-APPLICATIONS-3-409

**Result**

Subscription Name	Connector Type	Status	Message
NETWORK-APPLICATIONS-3-409 -- REST	REST	<span style="color: green;">●</span> SUCCESS	URL: https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2 invocation response: OK

https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2

## Results:

REQUESTS (1/500)

Oldest First

**POST** #543ec  
 64.102.249.8  
 Jul 15, 2020 9:42 PM

**Request Details**
[Permalink](#)
[Raw content](#)
[Export as ▾](#)

**POST** <https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2>

Host	64.102.249.8 <a href="#">whols</a>
Date	Jul 15, 2020 9:42 PM (a few seconds ago)
Size	1.3 kB
ID	543ec265-8c6f-4aa5-8d7b-e8a74082cf51

**Files**

**Query strings**

(empty)

**Raw Content**  Format JSON

```

{
  "version": "1.0.0",
  "instanceId": "af4e7e0e-3e0e-48de-825d-3dee58cfa227",
  "eventId": "NETWORK-APPLICATIONS-3-409",
  "namespace": "ASSURANCE",
  "name": "Drop in radio throughput for Cloud Applications",
  "description": "This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning models built for this network.",
  "type": "NETWORK",
  "category": "WARN",
  "domain": "Connectivity",
  "subDomain": "Wireless",
  "severity": 3,
  "source": "EXTERNAL",
  "timestamp": 1594863776123,
  "details": {
    "Type": "",
    "Assurance Issue Details": "APs in network are experiencing a drop in Cloud Applications throughput. These radios are in the band. These radios are located in ",
    "Assurance Issue Priority": "",
    "Assurance Issue Name": "At least % drop in radio throughput for Cloud Applications from baseline for AP(s) in .",
    "Assurance Issue Category": "",
    "Assurance Issue Status": ""
  },
  "ciscoDnaEventLink": "https://172.18.217.208/dna/assurance/issueDetails?issueId=",
  "note": "To programmatically get more info see here - https://<ip-address>/dna/platform/app/consumer-portal/developer-toolkit/apis?apiId=8684-39bb-4e89-a6e4",
  "context": "EXTERNAL",
  "userId": null,
  "i18n": null,
  "eventHierarchy": null,
  "message": null,
  "messageParams": null,
  "parentInstanceId": null,
  "network": null
}
          
```

**Headers**

connection	<a href="#">close</a>
user-agent	okhttp/4.4.0
accept-encoding	gzip
host	webhook.site
content-length	1294
content-type	application/json; charset=utf-8

**Form values**

(empty)

## Raw Content



```
{
  "version": "1.0.0",
  "instanceId": "af4e7e0e-3e0e-48de-825d-3dee58cfa227",
  "eventId": "NETWORK-APPLICATIONS-3-409",
  "namespace": "ASSURANCE",
  "name": "Drop in radio throughput for Cloud Applications",
  "description": "This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning models built for this network.",
  "type": "NETWORK",
  "category": "WARN",
  "domain": "Connectivity",
  "subDomain": "Wireless",
  "severity": 3,
  "source": "EXTERNAL",
  "timestamp": 1594863776123,
  "details": {
    "Type": "",
    "Assurance Issue Details": "APs in network are experiencing a drop in Cloud Applications throughput. These radios are in the band. These radios are located in ",
    "Assurance Issue Priority": "",
    "Assurance Issue Name": "At least % drop in radio throughput for Cloud Applications from baseline for AP(s) in .",
    "Assurance Issue Category": "",
    "Assurance Issue Status": ""
  },
  "ciscoDnaEventLink": "https://172.18.217.208/dna/assurance/issueDetails?issueId=",
  "note": "To programmatically get more info see here - https://<ip-address>/dna/platform/app/consumer-portal/developer-toolkit/apis?apiId=8684-39bb-4e89-a6e4",
  "context": "EXTERNAL",
  "userId": null,
  "i18n": null,
  "eventHierarchy": null,
  "message": null,
  "messageParams": null,
  "parentInstanceId": null,
  "network": null
}
```



**Step 5**

- In the Cisco DNA Center GUI (which ever navigation option that you chose), Select the Event ID already configured.
- Click Subscribed hyperlink in the last column the for the selected Event ID.
- Click on Subscribe

<input checked="" type="checkbox"/>	NETWORK-APPLICATIONS-3-409	<a href="#">Drop in radio throughput for Cloud Applications</a>	This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning mode...	NETWORK	WARN	3	<span style="color: green;">●</span> <a href="#">Subscribed (1)</a>
-------------------------------------	----------------------------	---	--	---------	------	---	---

### Drop in radio throughput for Cloud Applications ✕

Event Details
Active Subscriptions

Active Subscriptions (1)

Broadcast Methods <span style="font-size: 0.8em;">▲</span>	Count and Instances	Actions
REST	▼ 1	
NETWORK-APPLICATIONS-3-409 -- REST		<a href="#">Unsubscribe</a>   <a href="#">Edit</a>

Cancel
Subscribe
Try it

**Step 6**

In the Subscribe configuration window, you will need to configure the Subscription Details.

**SUBSCRIPTION DETAILS**

Name

Subscription Type

Subscription Endpoint

**Note:** There are specific Parameters that are specified for each Subscription Type. We will configure these for Subscription Types REST & EMAIL.

**Subscription #2 for EVENT\_ID**

Name

[NETWORK-APPLICATIONS-3-409 -- EMAIL](#)

Subscription Type

[EMAIL](#)

Subscription Endpoint

Create a new endpoint

Endpoint Name

[NETWORK-APPLICATIONS-3-409 -- EMAIL](#)

Endpoint Description

[webhook.site.EMAIL](#)

SMTP Configuration

*Default (no change)*

Email Recipients

From

[netadmin@dna.local](mailto:netadmin@dna.local)

To

[f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site](mailto:f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site)

Subject

[NETWORK-APPLICATIONS-3-409 -- Cisco DNA Center](#)

## Subscribe

1 Event selected

### SUBSCRIPTION DETAILS

Name\*  
NETWORK-APPLICATIONS-3-409 -- EMAIL

Subscription Type  
EMAIL

Select an existing endpoint  Create a new endpoint

Endpoint Name\*  
NETWORK-APPLICATIONS-3-409 -- EMAIL

Endpoint Description\*  
webhook.site.EMAIL

> SMTP Configuration

∨ Email Recipients

From\*  
netadmin@dna.local

To\*  
f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhook.site

Add Email

Subject\*  
NETWORK-APPLICATIONS-3-409 -- CI

[Cancel](#) [Subscribe](#)

- Click Subscribe

**Note:** From the Event ID subscription window, you will now see 2 Active Subscriptions: One for REST API and One for EMAIL.

## Drop in radio throughput for Cloud Applications ✕

Event Details **Active Subscriptions**

### Active Subscriptions (2)

Broadcast Methods <span>▲</span>	Count and Instances	Actions
EMAIL	▼ 1	
	NETWORK-APPLICATIONS-3-409 -- EMAIL	<a href="#">Unsubscribe</a>   <a href="#">Edit</a>
REST	▼ 1	
	NETWORK-APPLICATIONS-3-409 -- REST	<a href="#">Unsubscribe</a>   <a href="#">Edit</a>

[Cancel](#) [Subscribe](#) [Try it](#)

Now, Test your Active Subscriptions Once Again.

- Open another browser to your webhook site  
ie. <https://webhook.site/#!/f6dced27-9b2e-4d76-9e40-df21eccae9d2>
- Click "Try It"

## Notification

<b>Event Name</b>	<b>Event Id</b>
Drop in radio throughput for Cloud Applications	NETWORK-APPLICATIONS-3-409

Instance Id	Name
2339de9d-d921-4687-92ab-3fe823b7	Drop in radio throughput for Cloud App

Description

This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning models built for this network.

Namespace	Context	Source
ASSURANCE	EXTERNAL	EXTERNAL

Type	Category	Severity
NETWORK	WARN	3

Domain	Sub Domain
Connectivity	Wireless

Details

1	{}
---	----

Cancel Publish



- Click "Publish" from the Notification Window

- View the Output on the Notification Window and the webhook site

### Notification

**Event Name** Drop in radio throughput for Cloud Applications      **Event Id** NETWORK-APPLICATIONS-3-409

**Result**

Subscription Name ▲	Connector Type	Status	Message
NETWORK-APPLICATIONS-3-409 -- EMAIL	EMAIL	 SUCCESS	
NETWORK-APPLICATIONS-3-409 -- REST	REST	 SUCCESS	URL: https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2 invocation response: OK

https://webhook.site/#/f6dced27-9b2e-4d76-9e40-df21eccae9d2

Results:

Webhook REST API

REQUESTS (1/500)  
Oldest First

**POST** #23d55  
64.102.249.16  
Jul 15, 2020 10:16 PM

**Mail** #08827  
netadmin@dna.local  
Jul 15, 2020 10:16 PM

**Request Details** [Permalink](#) [Raw content](#) [Export as](#)

**POST** <https://webhook.site/f6dced27-9b2e-4d76-9e40-df21eccae9d2>

Host 64.102.249.16 [whois](#)

Date Jul 15, 2020 10:16 PM (a few seconds ago)

Size 1.3 kB

ID 23d55ec1-3ef7-452c-b255-9b6ebef64dc2

**Files**

**Query strings**  
(empty)

**Headers**

connection	close
user-agent	okhttp/4.4.0
accept-encoding	gzip
host	webhook.site
content-length	1294
content-type	application/json; charset=utf-8

**Form values**  
(empty)

**Raw Content**  Format JSON

```
{
  "version": "1.0.0",
  "instanceId": "2339de9d-d921-4687-92ab-3fe823b72186",
  "eventId": "NETWORK-APPLICATIONS-3-409",
  "namespace": "ASSURANCE",
  "name": "Drop in radio throughput for Cloud Applications",
  "description": "This issue is raised when the radio throughput for Cloud Applications is small er than the baseline. The baseline is generated using Machine Learning models built for this net work.",
  "type": "NETWORK",
  "category": "WARN",
  "domain": "Connectivity",
  "subDomain": "Wireless",
  "severity": 3,
  "source": "EXTERNAL",
  "timestamp": 1594865798466,
  "details": {
    "Type": "",
    "Assurance Issue Details": "APs in network are experiencing a drop in Cloud Applications thr oughput. These radios are in the band. These radios are located in ",
    "Assurance Issue Priority": "",
    "Assurance Issue Name": "At least % drop in radio throughput for Cloud Applications from bas eline for AP(s) in .",
    "Assurance Issue Category": "",
    "Assurance Issue Status": ""
  },
  "ciscoDnaEventLink": "https://172.18.217.208/dna/assurance/issueDetails?issueId=",
  "note": "To programmatically get more info see here - https://<ip-address>/dna/platform/app/co nsumer-portal/developer-toolkit/apis?apiId=8684-39bb-4e89-a6e4",
  "context": "EXTERNAL",
  "userId": null,
  "i18n": null,
  "eventHierarchy": null,
  "message": null,
  "messageParams": null,
  "parentInstanceId": null,
  "network": null
}
```

## Webhook EMAIL

<p>REQUESTS (1/500)</p> <p><a href="#">Oldest First</a></p> <p><b>POST</b> #23d55 64.102.249.16 Jul 15, 2020 10:16 PM</p> <p><b>Mail</b> #08827 netadmin@dna.local Jul 15, 2020 10:16 PM</p>	<p><b>Request Details</b> <a href="#">Permalink</a> <a href="#">Raw content</a></p> <p>Host <a href="#">dna.local</a> <a href="#">whois</a></p> <p>Date Jul 15, 2020 10:16 PM (a few seconds ago)</p> <p>Size 6.8 kB</p> <p>ID 08827f47-6db1-4120-ba84-9b4c94cb30ff</p> <p><b>Verification Checks</b></p> <table border="1"> <tr><td>spam</td><td>Passed</td></tr> <tr><td>virus</td><td>Passed</td></tr> <tr><td>spf</td><td>Failed</td></tr> <tr><td>dkim</td><td>Failed</td></tr> <tr><td>dmarc</td><td>Failed</td></tr> </table>	spam	Passed	virus	Passed	spf	Failed	dkim	Failed	dmarc	Failed	<p><b>Headers</b></p> <p>authentication-results <a href="#">amazonses.com; spf=none (spfCheck: 173.37.142.93 ...</a></p> <p>content-type <a href="#">multipart/mixed; boundary="-----_Part_0_714680275...</a></p> <p>date <a href="#">Thu, 16 Jul 2020 02:16:38 +0000 (UTC)</a></p> <p>from <a href="#">netadmin@dna.local</a></p> <p>message-id <a href="#">&lt;190790773.1.1594865799210.JavaMail.maglev@dna-ev...</a></p> <p>mime-version <a href="#">1.0</a></p> <p>received <a href="#">from alln-iptort-6.cisco.com (alln-iptort-6.cisco.c...</a></p> <p>received-spf <a href="#">none (spfCheck: 173.37.142.93 is neither permitte...</a></p> <p>return-path <a href="#">&lt;netadmin@dna.local&gt;</a></p> <p>subject <a href="#">NETWORK-APPLICATIONS-3-409 -- Cisco DNA Center</a></p> <p>to <a href="#">f6dced27-9b2e-4d76-9e40-df21eccae9d2@email.webhoo...</a></p> <p>x-ironport-anti-spam-filtered <a href="#">true</a></p> <p>x-ironport-anti-spam-result <a href="#">A0BCAw8Htw9f/5pdJa1gHAEBQAQcBARIBAQQEAQGCCoEjE...</a></p> <p>x-ironport-av <a href="#">E=Sophos;i="5.75,357,1589241600"; d="scan'208,217...</a></p> <p>x-outbound-node <a href="#">rcdn-core-3.cisco.com</a></p> <p>x-outbound-smtp-client <a href="#">172.18.242.207, d1-dnac1x-cl.cisco.com</a></p>
spam	Passed											
virus	Passed											
spf	Failed											
dkim	Failed											
dmarc	Failed											





## Webhook EMAIL


```

boundary="====_Part_0_714680275.1594865799009"
X-Outbound-SMTP-Client: 172.18.242.207, d1-dnac1x-cl.cisco.com
X-Outbound-Node: rcdn-core-3.cisco.com

====_Part_0_714680275.1594865799009
Content-Type: text/html;charset=utf-8
Content-Transfer-Encoding: quoted-printable

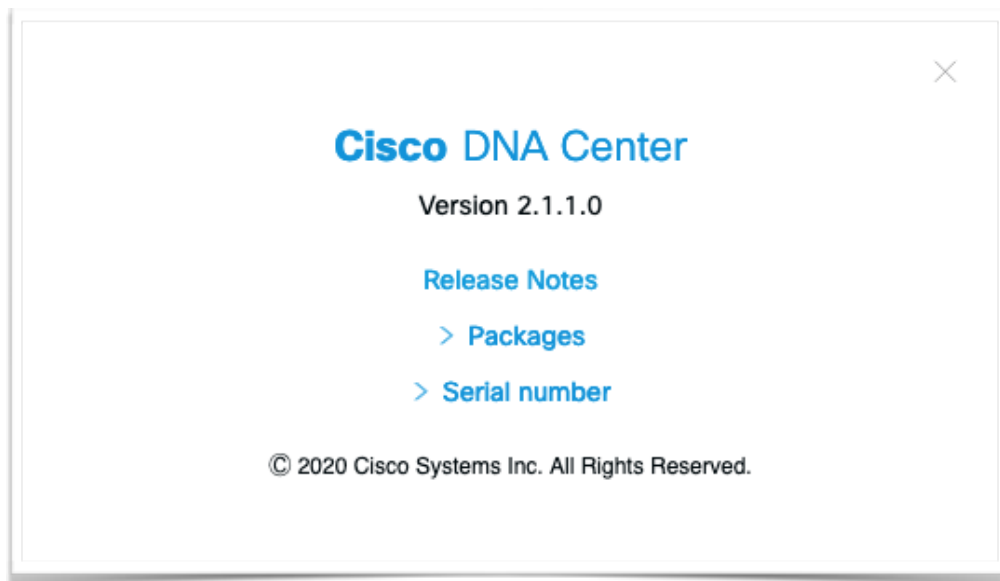
<style> @media screen { @font-face { font-family: 'CiscoSans'; font-style: =
normal; font-weight: 400; src: local('CiscoSans Regular'), local('CiscoSans=
-Regular'), url(https://www.static-cisco.com/c/dam/assets/fonts/cisco-sans/=
CiscoSansTTRegular.woff) format('woff'); } } body{ font-family: 'CiscoSans'=
} .header{ font-size: 14px; margin-bottom: 10px; } h1.logo{ color: #049fd9=
; background-color: #f2fbfd; font-size: 25px; padding: 5px 5px; } </style> =
<div class=3D'header'> <h1 class=3D'logo'><b>Cisco</b> <span style=3D'font=
weight: 300'>DNA Center</span></h1> <br/> <div class=3D'recipientName'>Cisc=
o DNA Center Consumer,</div> <br/> <div>You're receiving this message, base=
d on the email notification preference(s) set by Cisco DNA Center Administr=
ator. Here are the details about the event notification.</div> </div> <styl=
e> table{ width: 100%; font-size: 14px; border-collapse: collapse; } td { b=
order: 1px solid #ddd; padding: 5px; width: 50%; margin: 0px; } th { border=
: 1px solid #ddd; padding: 5px; width: 50%; margin: 0px; } tr:nth-child(eve=
n) { background-color: #fbfbfb; } tr:nth-child(odd) { background-color: whi=
te; } </style> <table> <tr> <td style=3D'width: 30%;font-weight:600'>Event =
ID</td> <td style=3D'width: 70%;'>NETWORK-APPLICATIONS-3-409</td> </tr> <tr>
> <td style=3D'width: 30%;font-weight:600'>Event Timestamp</td> <td style=
=3D'width: 70%;'>1594865798466</td> </tr> <tr> <td style=3D'width: 30%;font=
-weight:600'>Event Name</td> <td style=3D'width: 70%;'>Drop in radio throug=
hput for Cloud Applications</td> </tr> <tr> <td style=3D'width: 30%;font-we=
ight:600'>Event Type</td> <td style=3D'width: 70%;'>NETWORK</td> </tr> <tr>=
<td style=3D'width: 30%;font-weight:600'>Cisco DNA Center Event Context li=
nk<br/><sup>***</sup>This link is active only in the context of Cisco DNA Ce=
ntr. You must have necessary permissions to login</td> <td style=3D'width:=
70%;'><a href=3Dhttps://172.18.217.208/dna/assurance/issueDetails?issueId=
=3D>Click here for Details</a></td> </tr> <tr> <td style=3D'width: 30%;font=
-weight:600'>Event Details</td> <td style=3D'width: 70%;'> <table style=3D'=
width: 100%;font-size: 14px'> <tr><th>Type</th><td></td></tr><tr><th>Assura=
nce Issue Details</th><td>APs in network are experiencing a drop in Cloud A=
pplications throughput. These radios are in the band. These radios are loc=
ated in </td></tr><tr><th>Assurance Issue Priority</th><td></td></tr><tr><th>Assu=
rance Issue Name</th><td>At least % drop in radio throughput for Clou=
d Applications from baseline for AP(s) in .</td></tr><tr><th>Assurance Issu=
e Category</th><td></td></tr><tr><th>Assurance Issue Status</th><td></td></=
</table> </td> </tr> </table> <br/></div> <style> div.footer{ font-size=
: 14px; margin-top: 20px; } div.footerDetails{ text-align:center; backgroun=
d-color:#e6e6e6; padding:5px; color:#6f6f6f; margin-top: 28px; } div.unsubs=
cribeMessage{ color:#4D73BE; } div.footerLogo{ text-align:center; font-siz=
e: 12px; padding: 5px; } div.logoBottom{ color: #049fd9; margin-top: -3px; =
font-size: 11px; } </style> <div class=3D'footer'> <div>Sincerely,<div> <di=
v>Cisco DNA Center</div> <div class=3D'footerDetails'> <div class=3D'unsubs=
cribeMessage'> To Unsubscribe to this notification, please contact your Cisc=
o DNA Center Administrator </div> <div>THIS EMAIL WAS AUTO-GENERATED - DO =
NOT REPLY TO THIS EMAIL</div> </div> <div class=3D'footerLogo'> <div class=
=3D'logoBottom'><span style=3D'color: black'>2020 </span><b>Cisco DNA Cente=
r</b></div> </div> </div>
====_Part_0_714680275.1594865799009--

```

<input checked="" type="checkbox"/>	NETWORK-APPLICATIONS-3-409	<a href="#">Drop in radio throughput for Cloud Applications</a>	This issue is raised when the radio throughput for Cloud Applications is smaller than the baseline. The baseline is generated using Machine Learning mode...	NETWORK	WARN	3	 <a href="#">Subscribed (2)</a>
-------------------------------------	----------------------------	---	--	---------	------	---	--

You have now completed adding Subscriptions for an Event ID using Webhook REST API and Webhook EMAIL endpoints.

You can now replicate this Events and Subscriptions Task for the other listed Event IDs on the Cisco DNA Center.



The End...