

SF JavaScript Meetup May 2018

# From Zero to Chatbot mini workshop

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# Agenda

- What are Chat Bots?
- What are the Benefits?
- Integrations vs Bots
- Getting Started with a Collaboration API
- Create a Chat Bot
- Using Deployment Services
- Creating a Webhook
- Testing Your Bot!

## What You Will Need:

- Cisco Spark API Account: <https://developer.webex.com/>
- Create Heroku Account: <https://heroku.com>
- JSON Viewer (optional): <http://tiny.cc/json-viewer>
- Github Account: <https://github.com>
- Heroku Alternative (local tunnels): Localtunnel.me or ngrok.com



# Objective



You mardi, 13:36  
storage



learninglab mardi, 13:36  
What is your favorite color?



You mardi, 13:36  
blue



learninglab mardi, 13:36  
*stored user preference*  
Cool, I love 'blue' too

# What are Chat Bots?

# Clippy!





Phone Mail Messages

What can I help you with?







CIRCUIT BREAKER

TECH

TRANSPORTATION

# Watch Amazon's Alexa summon a Tesla Model S out of a garage

22

by Tom Warren | [@tomwarren](#) | May 6, 2016, 6:59am EDT



## NOW TRENDING



MacBook Pro with Touch Bar review:  
a touch of the future

Carney Tells MPs Drop in Pound Is Due to Outlook for Slower

# The Bot Economy Is Growing Even Faster Than the App Economy Did

Apps are so 201



## The Bot Economy

A new economic system is on the way.

What does that system look like? Obviously, it's very hard to see what is going to replace industrial, financial capitalism while we are still inside of the system.

## TECHNOLOGY

Facebook Upside Coming From Growth of 'Bot Economy,' Says Citi



What are the opportunities and legal challenges in the bot economy?



# What are the Benefits?

problems  
customers  
have

problems  
your bots  
solve



**David J Bland** @davidjbland · Apr 26

I've analyzed the Silicon Valley Bot Startup trend and created a handy venn diagram to help explain it.



5.3K



6.3K





## SmartSheet (smartsheet@sparkbot.io)

Bot by Gupshup

Productivity

Docs Management

Other

The Smartsheet bot sends you notifications whenever there is a change in your Smartsheet

Add to Room

Published Oct 27 2016

[Developer Support](#)

[Developer Privacy Policy](#)

[Developer Website](#)

Set alerts with the smartsheet bot and you will be notified for every changes you make in your smartsheet.

Triggers:

1. AUTH - For authorizing the bot in Smartsheet
2. CAE - For creating and enabling bot alerts.
3. CRE - For creating bot alerts.
4. ENA - For enabling pre-created bot alerts.
5. DEL - To delete pre-created alerts.
6. LIST - To get list of bot alerts with their status.



MemeBot (bot)

Active 25 minutes ago



You 8:12 PM

we will test, in production! | insanity wolf



MemeBot (bot) 8:12 PM



# Integrations vs Bots

*An integration acts as YOU and can see and do the things you can do.*



# Out of Office Assistant is requesting the following:



- Post and delete messages on your behalf
- List the titles of rooms that you're in
- List the people in rooms that you're in
- Read the content of rooms that you're in
- Manage rooms on your behalf
- Read your profile and your company directory
- Invite people to rooms on your behalf

Decline

Accept

## Scopes

Scopes define the level of access that your integration requires. [Learn more](#)

- ☒ `spark:people_read` Read your users' company directory
- ☒ `spark:rooms_read` List the titles of rooms that your user's are in
- ☐ `spark:rooms_write` Manage rooms on your users' behalf
- ☒ `spark:memberships_read` List people in the rooms your user's are in
- ☐ `spark:memberships_write` Invite people to rooms on your users' behalf
- ☐ `spark:messages_read` Read the content of rooms that your user's are in
- ☐ `spark:messages_write` Post and delete messages on your users' behalf
- ☐ `spark:teams_read` List the teams your users are in
- ☐ `spark:teams_write` Create teams on your users' behalf
- ☐ `spark:team_memberships_read` List the people in the teams your user's belong to
- ☐ `spark:team_memberships_write` Add people to teams on your users' behalf
- ☐ `spark-admin:people_read` Access to read your user's company directory

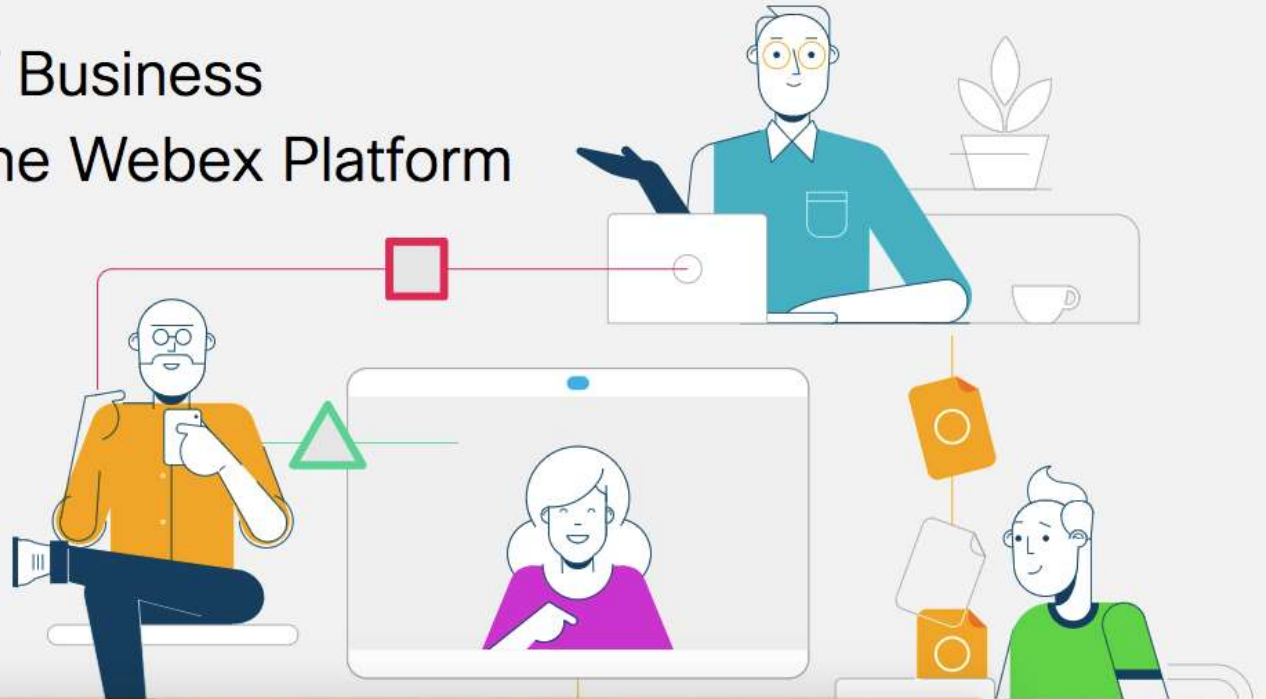
*A bot appears as another member of the room,  
but can only see messages that mention it.*

# Getting Started with a Collaboration API

## – Webex Teams API



# Build the Future of Business Collaboration on the Webex Platform

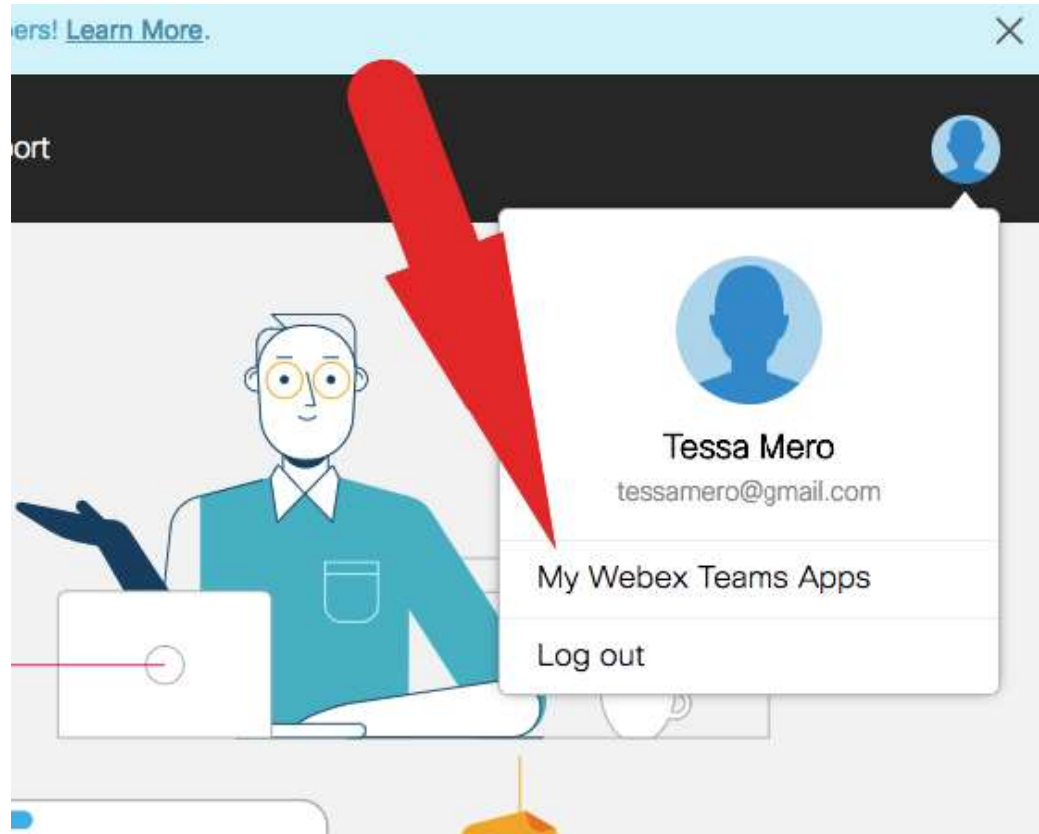


## Create a Free Account

- Create an account at <https://teams.webex.com> and Login
- Login to <https://developer.webex.com>

# Creating a Chat Bot

# Click on “My Webex Teams Apps”





# Click on "+"

[Docs](#) [Blog](#) [Support](#)



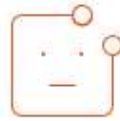
## My Apps



Get domain update required



# Select "Create a Bot"



Bot

Build intelligent chatbots that post content and respond to commands.

[Learn More](#)

**Create a Bot**

# New Bot

Name\*

Name of your bot in 100 characters or less.

TessaBotTest

Bot Username\*

The username users will use to add your bot to a space. Cannot be changed later.

tessabottest

@wehex.bot ✓

Icon\*

Exact size 512 (W) x 512 (H) in jpg or png format.

Upload your own or select from our defaults.



[Edit](#)

Description\*

Details of what your bot does, how it does, benefits, your business model and how an end user can get started in 1000 characters or less. Bullets and links markdown



Testing a bot

# Copy API Access Token (Not the Bot ID!)

## Bot's Access Token

Non-expiring (good for 100 years) access token for your bot.

ZmQxMWRkZGYtMzNiMI00M2Y4LTgxZDEtMmlxYmJlYzg2YjNmYTBIMjZhOTU0

Copy

The Secret will only be shown once so please copy and keep it safe! You can always regenerate it, but you will not see this one again.

# Add Bot to Chat on teams.webex.com

## Connect with people

Start a group conversation or chat with just one other person

🔍 tessabottest@webex.bot|

Go Chat

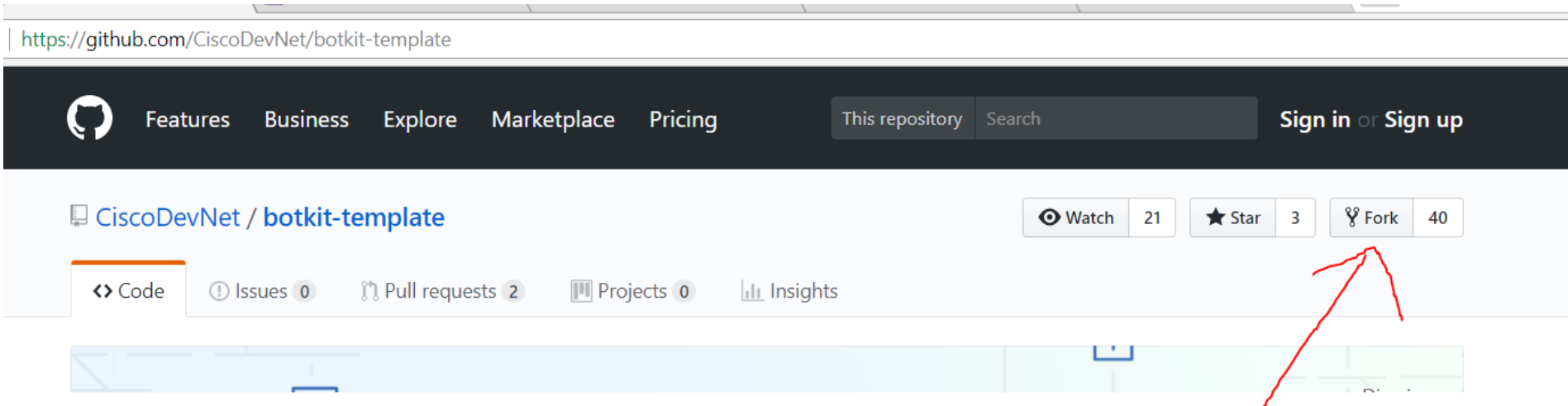


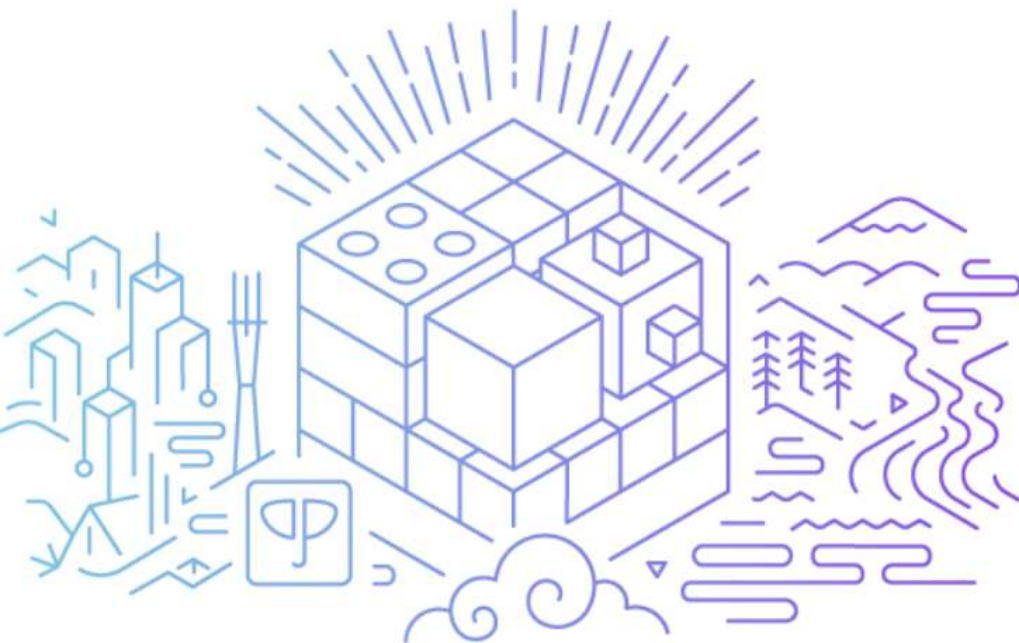
Tessa...

# Deploy a Bot on Heroku

# First - Fork the Github Repo

**<https://github.com/CiscoDevNet/botkit-template>**





NEW

## Heroku Postgres PGX: New Plans, More Possibilities

We're excited to announce our new lineup of Postgres production plans. PGX Plans introduce larger database sizes, more generous resource allocations, and a broader set of options to suit your needs and to help your applications scale more smoothly.

[SIGN UP FOR FREE](#)

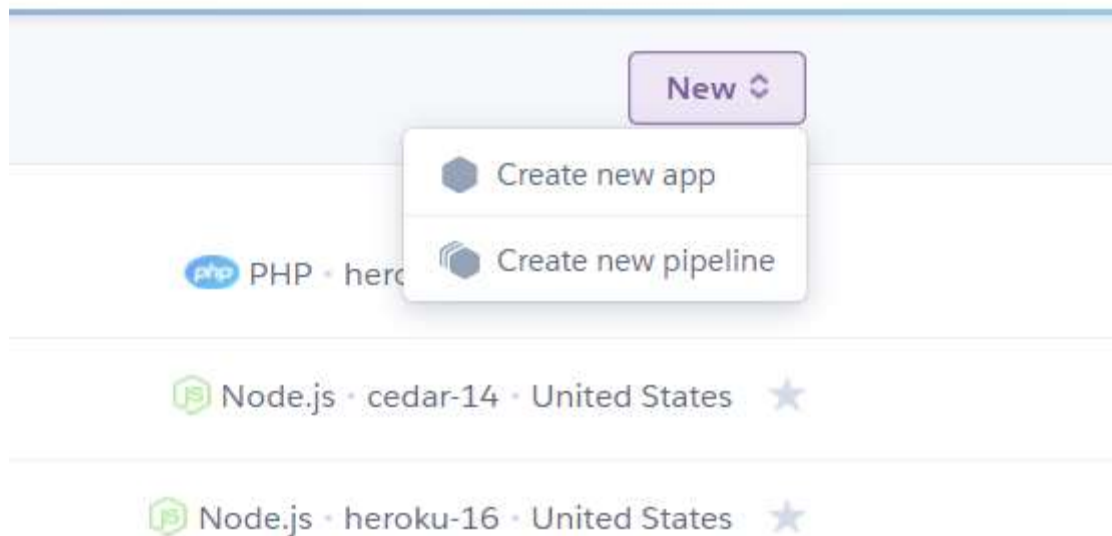
[Explore Heroku Postgres](#)

[Read our Announcement](#)





# Create New App



# Create App Unique Name

Create New App

App name

tessabottest



tessabottest is available

Choose a region



United States



Add to pipeline...

Create app

# Deployment method: Select GitHub

Personal apps > bot-hosting-lab

Overview Resources **Deploy** Metrics Activity Access Settings

Deployment method

Heroku Git  
Use Heroku CLI

**GitHub**  
Connect to GitHub

Dropbox  
Connect to Dropbox

Container Registry  
Use Heroku CLI

Connect to GitHub

Connect this app to GitHub to enable code diffs and deploys.

View your code diffs on GitHub

Connect your app to a GitHub repository to see commit diffs in the activity log.

Deploy changes with GitHub

Connecting to a repository will allow you to deploy a branch to your app.

Automatic deploys from GitHub

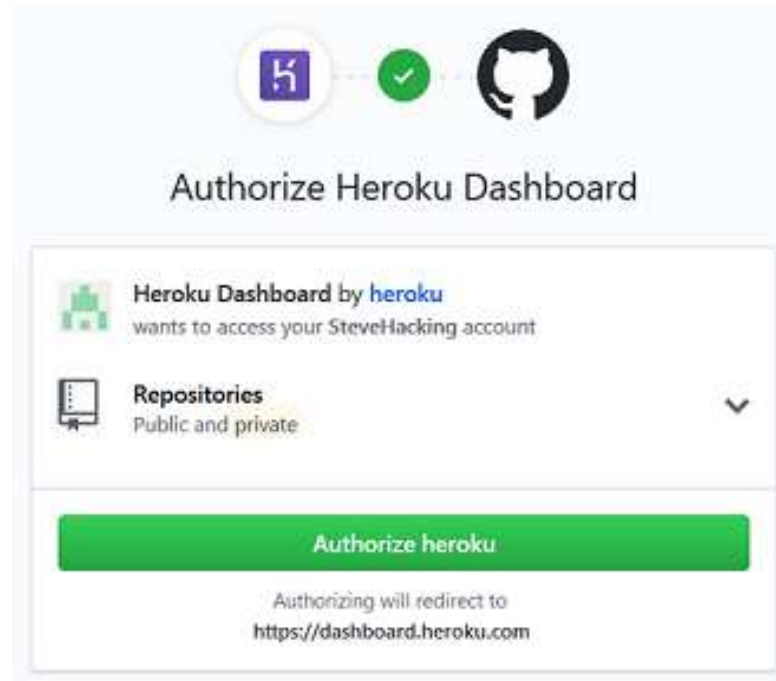
Select a branch to deploy automatically whenever it is pushed to.

Create review apps in pipelines

Pipelines connected to GitHub can enable review apps, and create apps for new pull requests. [Learn more](#).

**Connect to GitHub**

# Authorize GitHub



# Search for botkit-template repo in your GitHub – Connect!

## Connect to GitHub

Connect this app to GitHub to enable code diffs and deploys.

Search for a repository to connect to

Missing a GitHub organization? [Ensure Heroku Dashboard has team access.](#)

# Select “redis” branch – Deploy Branch

## Manual deploy

Deploy the current state of a branch to this app.

## Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#).

 redis

Deploy Branch

# Successfully Deployed – Click View

Deploy a GitHub branch

This will deploy the current state of the branch you specify below. [Learn more](#).

 redis

Deploy Branch

Receive code from GitHub



Build redis [Show build log](#)



Release phase



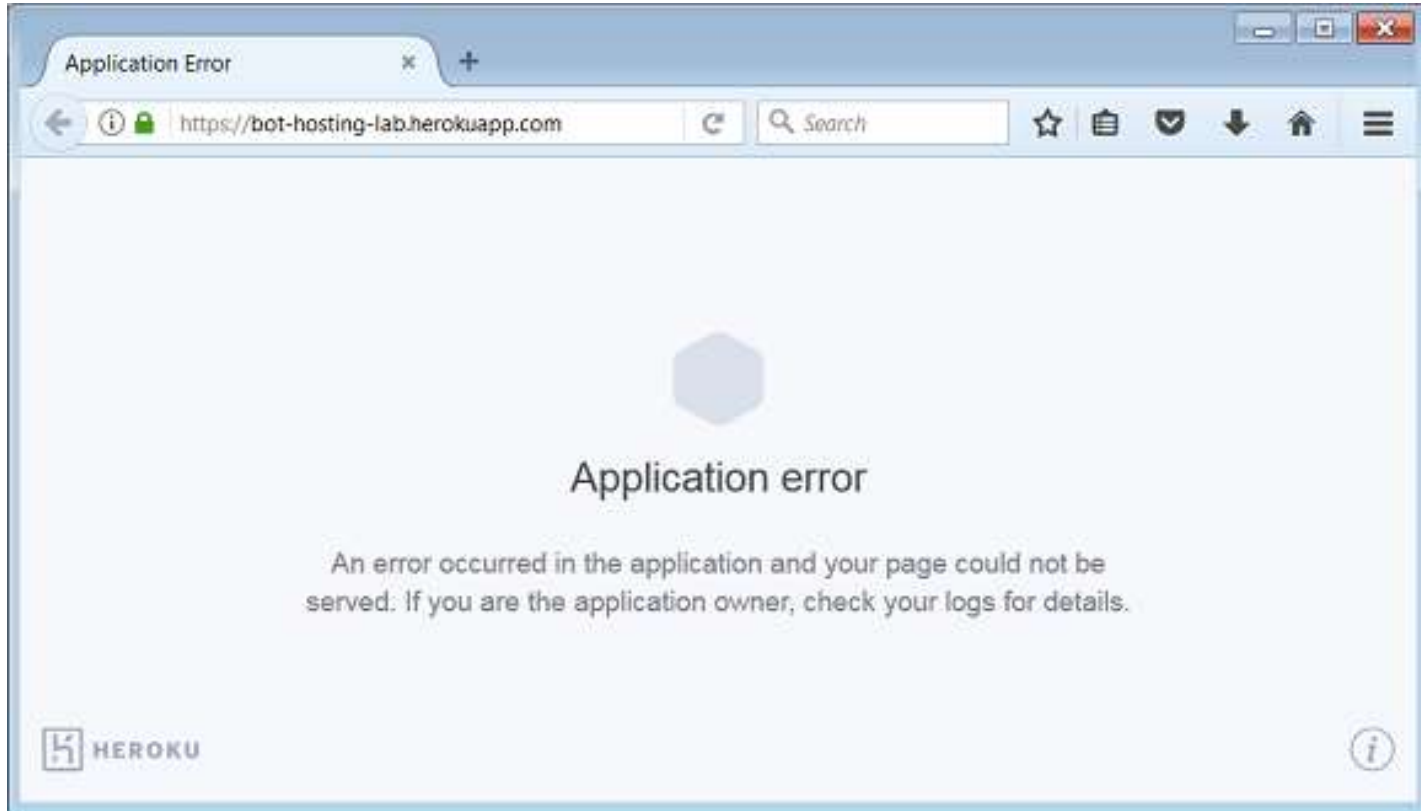
Deploy to Heroku



Your app was successfully deployed.

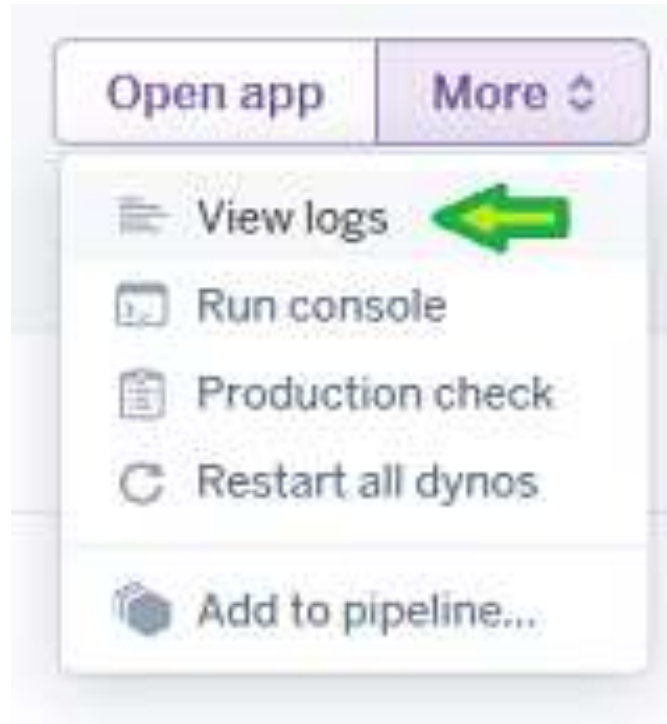
 View

# Application error





# View Error Logs



# View Errors (missing Spark token)

## Application Logs

```
2017-09-23T07:24:05.690662+00:00 heroku[web.1]: State changed from starting to crashed
2017-09-23T07:24:05.672572+00:00 heroku[web.1]: Process exited with status 1
2017-09-23T07:24:51.096828+00:00 heroku[web.1]: State changed from crashed to starting
2017-09-23T07:24:55.425122+00:00 heroku[web.1]: Starting process with command `npm start`
2017-09-23T07:25:02.960512+00:00 app[web.1]:
2017-09-23T07:25:02.960526+00:00 app[web.1]: > @0.6.0-redis3 start /app
2017-09-23T07:25:02.960527+00:00 app[web.1]: > node bot.js
2017-09-23T07:25:02.960528+00:00 app[web.1]:
2017-09-23T07:25:03.210237+00:00 app[web.1]: Could not start as bots require a Cisco Spark API access token.
2017-09-23T07:25:03.212596+00:00 app[web.1]: Please add env variable SPARK_TOKEN on the command line or to the .env file
2017-09-23T07:25:03.213229+00:00 app[web.1]: Example:
2017-09-23T07:25:03.213340+00:00 app[web.1]: > SPARK_TOKEN=XXXXXXXXXXXX PUBLIC_URL=YYYYYYYYYYYY node bot.js
2017-09-23T07:25:03.247424+00:00 app[web.1]:
2017-09-23T07:25:03.292780+00:00 app[web.1]: npm ERR! Linux 3.13.0-123-generic
2017-09-23T07:25:03.296822+00:00 app[web.1]: npm ERR! argv "/app/.heroku/node/bin/node" "/app/.heroku/node/bin/npm" "start"
2017-09-23T07:25:03.296828+00:00 app[web.1]: npm ERR! node v6.11.3
2017-09-23T07:25:03.296828+00:00 app[web.1]: npm ERR! npm v3.10.10
2017-09-23T07:25:03.296829+00:00 app[web.1]: npm ERR! code ELIFECYCLE
2017-09-23T07:25:03.296830+00:00 app[web.1]: npm ERR! @0.6.0-redis3 start: `node bot.js`
2017-09-23T07:25:03.296831+00:00 app[web.1]: npm ERR! Exit status 1
2017-09-23T07:25:03.296832+00:00 app[web.1]: npm ERR!
2017-09-23T07:25:03.296833+00:00 app[web.1]: npm ERR! Failed at the @0.6.0-redis3 start script 'node bot.js'.
2017-09-23T07:25:03.296833+00:00 app[web.1]: npm ERR! Make sure you have the latest version of node.js and npm installed.
2017-09-23T07:25:03.296834+00:00 app[web.1]: npm ERR! If you do, this is most likely a problem with the package,
```

 Autoscroll with output

# Go to Settings -> Reveal Config Vars


[Overview](#) [Resources](#) [Deploy](#) [Metrics](#) [Activity](#) [Access](#) [Settings](#)

Name	
tessabottest	<a href="#">Edit</a>

### Config Vars

Config vars change the way your app behaves. In addition to creating your own, some add-ons come with their own.

[Reveal Config Vars](#)



# Settings -> Reveal Config Variables -> Config Variables

## Config Vars

Config vars change the way your app behaves. In addition to creating your own, some add-ons come with their own.

## Config Vars

[Hide Config Vars](#)

PUBLIC\_URL

https://tessabottest.herokuapp.com/



ACCESS\_TOKEN

ZmQxMWRkZGYtMzNiMi00M2Y4LTgxZDEtMmIxYr



KEY

VALUE

Add

## Open App (Check if it is working)

```
1 // 20180530122858
2 // https://tessabotttest.herokuapp.com/
3
4 {
5   "up-since": "Wed, 30 May 2018 19:28:55 GMT",
6   "hostname": "f6e2e10b-0acb-4e28-ba99-b73dacc46710:30011",
7   "version": "v0.7.0-redis2",
8   "bot": "tessabotttest@webex.bot",
9   "botkit": "v0.6.14"
10 }
```

# Create Webhook events

# Webhook Documentation – developer.webex.com

**Cisco** Webex  
for Developers

**Docs**

Blog

Support

## WEBEX TEAMS API

People

Rooms

Memberships

Messages

Teams

Team Memberships

### Webhooks

List Webhooks

Create a Webhook

Get Webhook Details

## Webhooks

Webhooks allow your app to be notified via HTTP when a specific event occurs in Webex Teams. For example, your app can register a notified when a new message is posted into a specific room.

Events trigger in near real-time allowing your app and backend IT systems to stay in sync with new content and room activity.

Check the [Webhooks](#) Guide and our blog regularly for announcements of additional webhook resources and event types.

Method		Description
	<a href="https://api.ciscospark.com/v1/webhooks">https://api.ciscospark.com/v1/webhooks</a>	List Webhooks
	<a href="https://api.ciscospark.com/v1/webhooks">https://api.ciscospark.com/v1/webhooks</a>	Create a Webhook

# Turn on Test Mode -> Create Webex Webhook

POST

https://api.ciscospark.com/v1/webhooks

## Request Headers

Content-type	application/json; charset=utf-8
Authorization	<u>Bearer NWMzMGUyOGMtMzdmMC00OWF</u>

## Request Parameters

Name	Type	Your values		Required
name	string	<u>Heroku to WebexTeams</u>	(i)	✓
targetUrl	string	<u>https://tessabottest.her</u>	(i)	✓
resource	string	<u>messages</u>	(i)	✓
event	string	<u>all</u>	(i)	✓

## Request

```
{
  "name": "Heroku to WebexTeams",
  "targetUrl": "https://tessabottest.herokuapp.com",
  "resource": "messages",
  "event": "all"
}
```




## 200 Success!


- Click “Run”
- See a “200/success” displayed – webhook assigned to unique identifier
- Fired off every time a new message is added to a room your bot is a member of


# Test Your Webex Teams Bot


# Test Bots Response – type storage


All 1 +


 **TessaBotTest** 12:36 PM  
TessaBotTest · Cool, I love 'pink' too


 **Tessa Mero** Tuesday  
Tessa · TestingHello


 **Tessa Test Hackwars** 4/20/2018  
Tessa · testing push msg


 **Tessa ChatOps Bot** 4/9/2018  
Tessa · 2018-04-09 15:34:45.1940...


 **Chatops Bot Test** 4/9/2018  
This starts the "Chatops Bot Test" sp...


 **AWS Test Bot - Te...** 3/28/2018  
You · hi


 **Brad Bechtold** 3/28/2018  
You · Ahh looks like you messaged ...


 **CLEUR 18 Test** 1/30/2018  
CLEUR · Cool, I love 'pink' too

 **pizza test 2** 1/5/2018  
You · help


 **VA Test 1** 1/5/2018


 **TessaBotTest**  
Unknown status


 You · 11:44 AM  
hello

 You · 12:36 PM  
storage



NEW MESSAGES

 TessaBotTest · 12:36 PM  
What is your favorite color?

 You · 12:36 PM  
pink

 TessaBotTest · 12:36 PM  
successfully stored user preference

Cool, I love 'pink' too

Write a message to TessaBotTest



# Thank you