Making WebEx Teams Interactive with ChatOps & ChatBots
Cisco DevNet Webinar Series

Speaker: David Staudt | DevNet Developer Evangelist, Principal Engineer
Hostess: Kara Sullivan | Cisco Networking Academy
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6. Network Programmability & APIC-EM
7. Network Programmability with YANG/NETCONF/RESTCONF
8. Automating Cisco Spark with Cloud Integration
9. Using Python to Automate Cisco Spark

Making Cisco Spark Interactive with ChatOps & ChatBots – Today!

All Series Details can be Found @ http://bit.ly/devnetseries
Joining You Today:

David Staudt
Developer Evangelist, Principal Engineer
DevNet, Cisco
Cisco DevNet + NetAcad Webinar Series #4
Making Webex Teams Interactive with ChatOps and ChatBots

David Staudt
DevNet Developer Evangelist / Principal Engineer
Agenda

- Notification Bots: Putting the ‘Chat-Ops’ in ‘Dev-Ops’
- Controller Bots: The Next-Level CLI
- Bot Assistants: NLP, Sentiment, AI – Literally Star Trek
- Webex Teams Bots: Architectures and Tools
Cisco Spark is becoming Cisco Webex Teams.

Webex Teams is an app for continuous teamwork with video meetings, messaging, file sharing and white boarding.
Why Chat?

- Video
- Voice
- Chat
- Email
- Paper

Persistance

Interactivity

Extensibility
Why Chat Bots?

- Extend chat with application interaction
- Automation integrated where users work / live / play
- Information, control and assistance when / where needed
- Rapidly expanding automation paradigm across markets
- Easy-to-use open / free tools – quick wins
Notification Bots

• One-way communication: systems -> chat rooms
• Simple architecture: anything that can HTTP POST
• DevOps: GitHub, Jenkins, Ant, Maven
• SysAdmin: alerts, status, tickets
• Fabian: announcement bot (fabian@sparkbot.io)
• ChatOps Sample: chatops.py
Controller Bots

- Two-Way Communication: Systems <-> Chat Rooms
- Requires an Internet Accessible Application
- DevOps: Request Reports, View Issue Details
- SysAdmin: Execute Scripts, Dig Into Alert Data
- MemeBot: (memebot@sparkbot.io)
- ToGerman: translator (togerman@sparkbot.io)
Assistant Bots

- Two-way communication: assist bot <-> chat room
- Augment with additional APIs, external services
- Requires an internet accessible application
- Natural language processing: e.g. Google NLP
- Sentiment analysis
- Artificial intelligence: IBM Watson, API.ai
Top Cisco Spark API Horizontal Use Cases

- Incident Management
- Human Resources Onboarding
- Task Management
- Sales Pipeline
- Finance Operations
- Polling
- Scheduling
- Content Management
- Network Operations
Webex Teams Bots – Architecture and Tools
Open Source Starter Kits

https://ciscowebbexteamsambassadors.github.io/StarterKits/

Broadcast
by: Altus Consulting
A Multi-topic Cisco Webex Teams Notification Bot

OnBoarding
by: Bitmaker Software
Create user OnBoarding Flows for Cisco Webex Teams

Cisco Infrastructure Chat ...
by: Josh Anderson
ChatOps that bridges Meraki, Umbrella and Cisco Webex Teams

Webex Goggles
by: PromptWorks
‘You See What I See’ Remote Expert App for Android powered AR headsets

and many more…
Build-a-Bot Basic Instructions

• Create a bot account
• Write bot code to listen for incoming webhooks
• Make your bot server accessible to the internet
• Define a webhook / filter – event notifications
Create a Bot Account

New App

Integration

Create an integration to customize how teams on Spark interact with other applications.

Learn More

Create an Integration

Bot

Create rich messaging experiences on Spark with your intelligent Bots.

Learn More

Create a Bot

https://developer.webex.com/apps.html
Write Bot Code to Listen for Incoming Webhooks

• Integration platforms (iPaaS): Built.io, Stamplay, Zapier, node-red
• Bot hosting service: Gupshup.io, Zenbot.org
• Bot framework: Botkit, flint
• Sample / example code: https://github.com/CiscoDevNet/awesome-webex
• Build Your Own: Node.js+Express, Python+Flask – or build from scratch
Make your Bot Server Accessible to the Internet

- Integration platforms (iPaaS): Built.io, Stamplay, Zapier, IFTTT
- Bot hosting service: Gupshup.io, Zenbot.org
- Cloud hosting service: AWS, Azure, App Engine, Glitch
- Host it yourself: Domain, DNS, CA Cert, Firewall, NAT Traverse, H/A, etc.
Bot Hosting Services – Gupshup.io & Zenbot.org

sohan.js

```javascript
context.simpleDb.doPut("putby", event.sender);
}
else {
    context.sendResponse('No keyword found : '+event.message);
}
```

// Called when bot is added to group or bot is mapped

```javascript
function EventHandler(context, event) {
    if(!context.simpleDb.botLevelData.numInstance)
        context.simpleDb.botLevelData.numInstance = 0;
    numInstances = context.simpleDb.botLevelData.numInstance + 1;
    context.simpleDb.botLevelData.numInstance = numInstances;
    context.sendResponse("Bot mapped event..You are:" + numInstances);
}
```

// Handler for http request

```javascript
function HttpResponseHandler(context, event) {
    if(event.url === "http://ip-api.com/json")
        context.sendResponse(event.getResponse);
}
```

// Handler for db get request

```javascript
function DbGetHandler(context, event) {
```
Define a Webhook – Event Notifications

Webhooks Explained:
https://developer.webex.com/webhooks-explained.html
Spark Bot Assembly

1. New message
2. HTTP POST to Webhook URL
3. Data processed by your application

URL must be internet-accessible by Spark (not firewalled)
Developer Resources
Webex Teams Developer Resources

• Webex Teams API / SDK Docs:
  • https://developer.webex.com

• Cisco DevNet Webex Teams Resources:
  • https://developer.cisco.com/site/spark/
  • https://learninglabs.cisco.com/labs/tags/Spark,Webex+Teams/page/1

• GitHub Resources:
  • https://github.com/CiscoDevNet/awesome-webex

• Cisco Spark Developer Support:
  • https://developer.webex.com/support.html
Thank you
Qualifications for Certificate of Participation

Must Participate in at least 5 of the 10 sessions of the Cisco DevNet webinar series – whether through recordings or live sessions

Opportunity to earn a certificate will stay open for one month – until 23 July

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