



CURSO 525

INFRAESTRUTURA ÁGIL COM PRÁTICAS DEVOPS

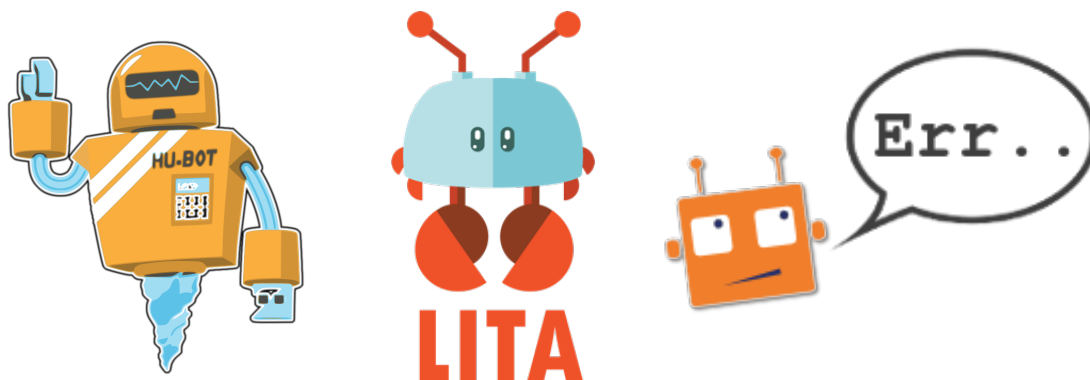


This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

- ## Anotações

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

ChatBots são programas de computador que tentam simular um ser humano através de uma “inteligência” e responder perguntas ou executar diversas ações. Os ChatBots mais conhecidos e utilizados no mercado são: **Hubot**, **Lita** e **Err**.

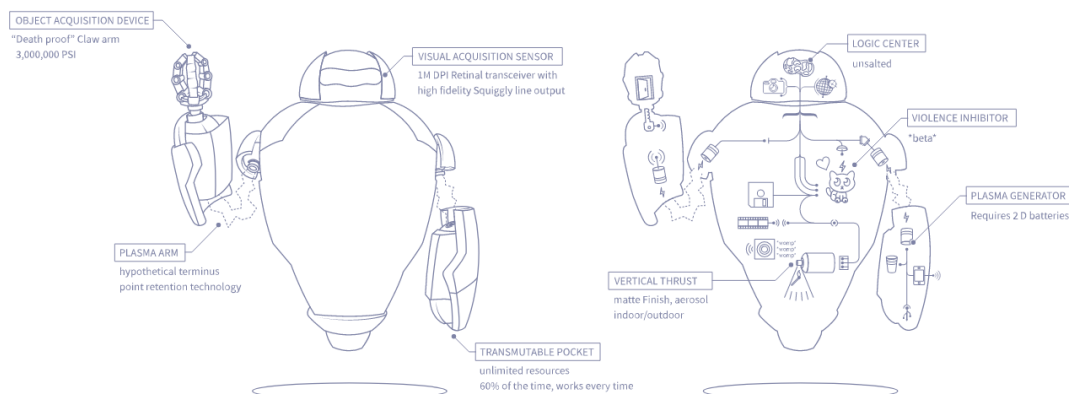


Hubot: ChatBot free e OpenSource, desenvolvido pelo GitHub em CoffeeScript / Node.js;

LITA: ChatBot free e OpenSource, desenvolvido em Ruby;

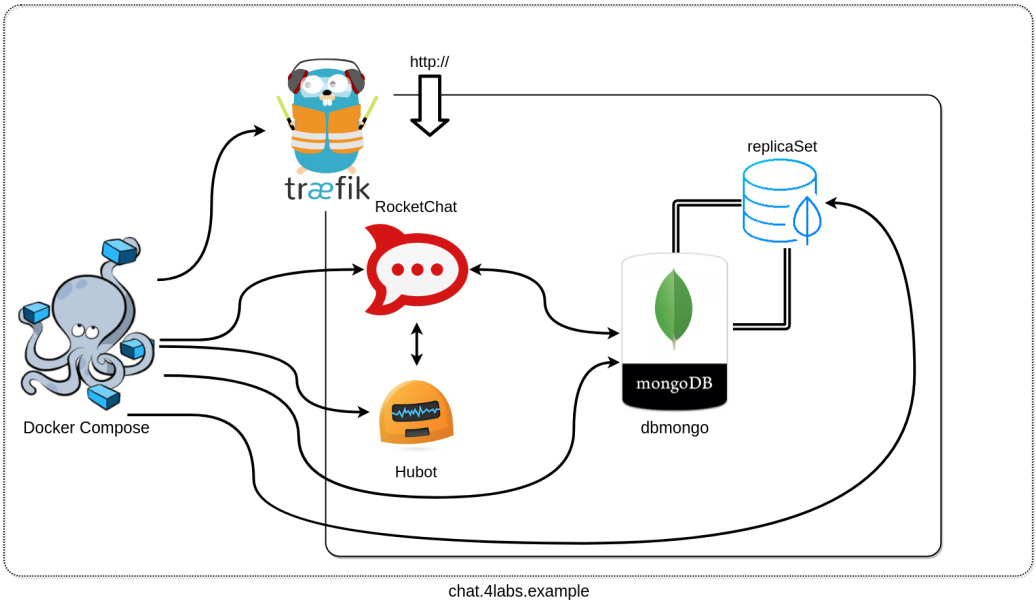
Err.. : ChatBot free e OpenSource, desenvolvido em Python.

Vamos utilizar o **Hubot** por se tratar do ChatBot mais utilizado no mercado e possuir inúmeros scripts da comunidade para utilização.



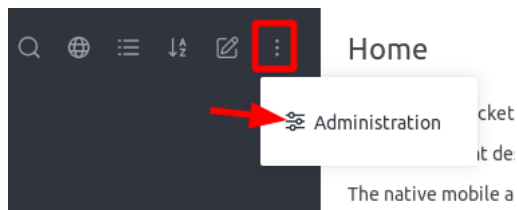
O hubot aceita scripts na linguagem **CoffeeScript**, é possível que o usuário crie suas próprias interações e construa a inteligência do Bot.

CoffeeScript: <https://coffeescript.org/>



Iremos adicionar um contêiner do hubot, para que o mesmo faça a conexão e mantenha o usuário bot online respondendo a comandos.

menu de **Administração**.



Anotações

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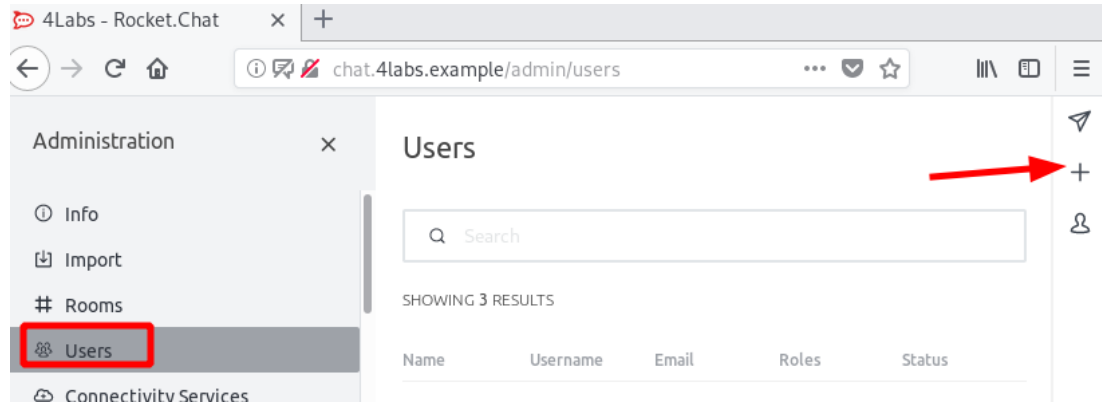
Criaremos agora o **Cyber Tux**, nosso ChatBot que realizará as tarefas através do RocketChat.



É interessante que seja criado um personagem para o nosso ChatBot. Isso faz com que o ambiente se torne mais agradável.

Também é possível criar interações extra-operacionais para nosso ChatBot, como por exemplo **cantar(em texto) parabéns** aos aniversariantes do dia. Atitudes como esta criam ótimos ambientes de descontração.

No menu usuário, adicione um novo usuário que será impersonado pelo nosso ChatBot.



Anotações


[illegible]

Preencha os campos, adicione um **avatar**, adicione a role **bot** e clique em **Save**.

The screenshot shows the Hubot configuration interface. Red boxes and arrows highlight the following elements:

- Profile Picture:** A red box around the avatar image, and another red box around the upload icon with an arrow pointing to it. Below the image is a text input field labeled "Use URL for avatar".
- Name:** A text input field containing "cybertux".
- Username:** A text input field containing "@ cybertux".
- Email:** A text input field containing "bot@4labs.example".
- Verified:** A checkbox that is checked.
- Status Message:** A text input field containing "Beep Boop Bleep".
- Password:** A text input field containing "devops@4linux".
- Require password change:** A checkbox that is checked.
- Roles:** A section showing a list of roles with "bot" selected. A red arrow points to the "bot" role.
- Add Role:** A section with a dropdown menu showing "BOT" and an "Add Role" button.
- Join default channels:** A checkbox that is unchecked.
- Send welcome email:** A checkbox that is unchecked.
- Buttons:** "Cancel" and "Save" buttons at the bottom right. A red arrow points to the "Save" button.

Existe uma imagem chamada **cybertux.png** na raiz do repositório do curso, caso deseje, é possível utilizar qualquer outra imagem de avatar clicando em upload.



A screenshot of the Slack interface. The top navigation bar is dark grey. On the left, there is a search icon and a dropdown menu. The dropdown menu is open, showing two options: '# Channel' and 'Discussion'. A red arrow points to the '# Channel' option, indicating it is the selected action.

Create

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Vamos editar o canal e adicionar um Announcement e Topic.

Anotações

[illegible]

The screenshot shows the Slack interface. The left sidebar contains navigation icons: a home icon (house), a search icon (magnifying glass), a plus icon (add), a list icon (three horizontal lines), a download icon (downward arrow), an edit icon (pencil), and a more options icon (three vertical dots). Below these icons, the text "Discussions" is visible. Under the "Channels" section, there are four channels listed: "# devops" (blue icon), "# general" (green icon), "# gogs" (purple icon), and "# rundeck" (red icon). Under the "Private Groups" section, there is one group listed: "chatops" (blue icon).

ChatOps Channel

Start of conversation

September 4, 2019

- analista 6:16 AM Room topic changed to: *ChatBot @cybertux* by analista
- analista 6:16 AM Room announcement changed to: *ChatOps Channel* by analista
- analista 6:16 AM Room description changed to: *(none)* by analista

Anotações

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container.4labs.example

- ## Anotações

1

Adicione o conteúdo do hubot ao arquivo docker-compose utilizando o modelo da pasta Aula 12.4:

```
# cp /vagrant/4525/arquivos/Aula\ 12.4/docker-compose.yml .
# cat docker-compose.yml
hubot:
  image: rocketchat/hubot-rocketchat:latest
  hostname: hubot
  restart: unless-stopped
  extra_hosts:
    - "automation.4labs.example:10.5.25.10"
  environment:
    - ROCKETCHAT_URL=rocketchat:3000
  (...)
```

container.4labs.example

Os módulos do Hubot são definidos através da variável de ambiente `EXTERNAL_SCRIPTS`. Ao iniciar o container, o hubot utiliza o **npm** para efetuar o download dos módulos e coloca-os em seus devidos locais.

O módulo **hubot-rundeck** será o responsável pela integração com o rundeck:

===== HUBOT =====

```
hubot:
  image: rocketchat/hubot-rocketchat:latest
  hostname: hubot
  restart: unless-stopped
  extra_hosts:
    - "automation.4labs.example:10.5.25.10"
  environment:
    - ROCKETCHAT_URL=rocketchat:3000
    - ROCKETCHAT_ROOM=general
    - ROCKETCHAT_USER=cybertux
    - ROCKETCHAT_PASSWORD=devops@4linux
    - ROCKETCHAT_AUTH=password
    - BOT_NAME=chatops
    - LISTEN_ON_ALL_PUBLIC=true
    - EXTERNAL_SCRIPTS=hubot-help,hubot-seen,hubot-links,hubot-diagnostics,hubot-rundeck
  depends_on:
    - rocketchat
  labels:
    - "traefik.enable=false"
```

Atualize o compose:





```
# docker-compose up -d
```

Acompanhe a execução:

```
# docker-compose logs -f
```

Anotações


Após a execução, o usuário **@cybertux** ficará online, sendo impersonado pelo container hubot.

Name	Username	Email	Roles	Status
 Analista DevOps	analista	analista@4labs.example	admin	online
 cybertux	cybertux	bot@4labs.example	bot	online
 Diretor DevOps	diretor	diretor@4labs.example	user	offline
 Rocket.Cat	rocket.cat		bot	online


Anotações

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Acesse a sala **#chatops** e faça interações com o bot, através do comando **@cybertux help**.




analista Admin 6:30 AM




cybertux help




cybertux 6:30 AM




cybertux adapter - Reply with the adapter




cybertux echo <text> - Reply back with <text>




cybertux help - Displays all of the help commands that this bot knows about.




cybertux help <query> - Displays all help commands that match <query>.




cybertux links clear - Clears all tracked links




cybertux links list [<number>] - Returns the last 5 (or <number> if specified) links shared




cybertux ping - Reply with pong




cybertux rundeck add alias [alias name] [url] [authToken] - sets the alias for a given url and authentication token




cybertux rundeck clear alias [alias name] - removed the given alias




cybertux rundeck projects [alias] - Gets a list of the projects for the given server alias




cybertux rundeck show aliases - shows the aliases for the list of rundeck instances




cybertux rundeck status '[job]' '[project]' [alias] - Shows the current status for the latest execution of the given job




cybertux rundeck trigger '[job]' '[project]' [alias] [args] - Triggers the given job for the given project




cybertux seen <user> - show when and where user was last seen




cybertux seen in last 24h - list users seen in last 24 hours



cybertux time - Reply with current time



hubut rundeck jobs '[project]' [alias] - Gets a list of all the jobs in the given project for the given server alias



rundeck show status of (.) (?inlFor) (.) (?inlFor) (*)

Anotações

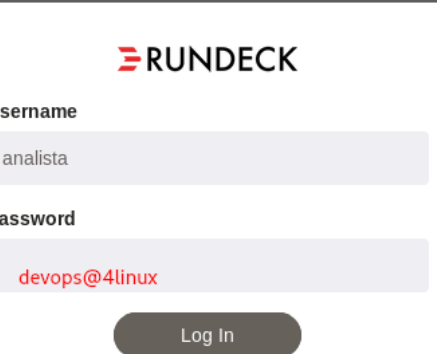
[illegible]


```
(node) sys is deprecated. Use util instead.
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Message receive callback id SESXPHy8LXEiaE7o3 ts We
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO [Incoming] analista: @cybertux help
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Checking to see if method: getRoomNameById exists
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Looking up Room Name for: XrSPDyw6JbCAYeBRW
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO setting roomName: chatops
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Message sent to hubot brain.
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:30:27 GMT+0000 (UTC)] INFO Looking up Room ID for: chatops
[Wed Sep 04 2019 09:30:28 GMT+0000 (UTC)] INFO Message received with ID id
```

Anotações

[illegible]

Precisamos agora integrar nosso bot com o Rundeck, para isto, acesse o Rundeck em <http://automation.4labs.example:4440> e efetue login como analista.



 RUNDECK

Username

analista

Password

devops@4linux

Log In

Anotações

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Hi analista!

Profile

Logout

User API Tokens +

Showing tokens 1 to 0 of 0 total.

TOKEN	EXPIRATION DATE
-------	-----------------

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and extend across the width of the page. There are no margins, text, or other markings on the paper.

Generate New Token.

[+ Generate New Token](#)

Anotações

[illegible]

TOKEN	EXPIRATION DATE	USERNAME	ROLES
<div><div>Show Token</div></div>	in 29d23h	2019-10-04 09:39:55 UTC	analista
			build,analista,architect,admin,user,deploy
			<div>Delete</div>

TOKEN	EXPIRATION DATE	USERNA
L4M1P1JuwTjUc1wKNWcfosDJPTbga4ka	in 29d23h 09:39:55 UTC	analista

Anotações

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No Rocketchat, o primeiro passo necessário é adicionar o Alias do Rundeck através do comando:

```
@<BOTNAME> rundeck add alias <ALIAS> <ADDRESS> <TOKEN>
```

1

```
@cybertux rundeck add alias automation
http://automation.4labs.example:4440 <TOKEN>
```



analista Admin Owner 6:44 AM

cybertux rundeck add alias automation <http://automation.4labs.example:4440> L4M1PLJuWTjUc1WkNWcfoSDJPTbga4ka



cybertux 6:44 AM

The rundeck system alias automation for <http://automation.4labs.example:4440> has been added to the brain

container.4labs.example

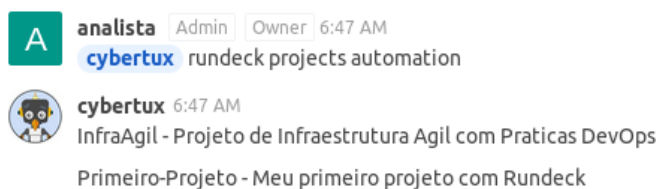
Syntax:

```
@<BOTNAME> rundeck add alias <ALIASNAME> <IPADDRESS> <APITOKEN>
```


Agora, podemos executar alguns comandos para o Hubot interagir com o Rundeck.

1

Liste os projetos do Rundeck:
@cybertux rundeck projects automation



container.4labs.example

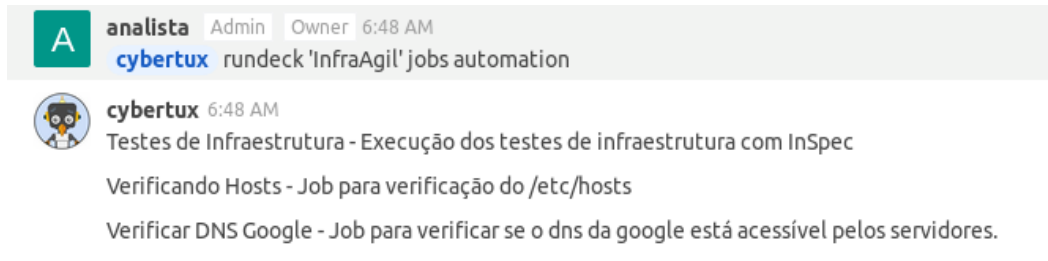
Os nomes de Projetos são exibidos no formato **<PROJECTNAME> - <PROJECTDESCRIPTION>**

Syntax:

@<BOTNAME> rundeck project <ALIASNAME>

1

Liste os Jobs do projeto de InfraAgil:
@cybertux rundeck 'InfraAgil' jobs automation



container.4labs.example

Os nomes dos jobs são exibidos no formato **<JOBNAME> - <JOBDESCRIPTION>**

Para efetuar a chamada, utilizamos apenas o nome do job.

Syntax:

@<BOTNAME> rundeck <PROJECTNAME> jobs <ALIASNAME>

1

Execute o Job Verificando Hosts:

```
@cybertux rundeck trigger 'Verificando Hosts' 'InfraAgil' automation
```

**analista**

Admin

Owner

6:49 AM

cybertux

rundeck trigger 'Verificando Hosts' 'InfraAgil' automation

**cybertux** 6:49 AM

Successfully triggered a run for the job: Verificando Hosts

container.4labs.example

Syntax:

```
@<BOTNAME> rundeck trigger <JOBNAME> <PROJECTNAME> <ALIASNAME>
```

☆ #rundeck 🔍 🗨

RunDeck

@rocket.cat

Moderator

Bot

6:49 AM

RunDeck Job Started

Job Name	Project	Status	Execution ID	Options	Started By
/Verificando Hosts	InfraAgil	Started	#152	N/A	analista

RunDeck

@rocket.cat

Moderator

Bot


6:50 AM

RunDeck Job Succeeded



Job Name	Project	Status	Execution ID	Options	Started By
/Verificando Hosts	InfraAgil	Succeeded	#152	N/A	analista

Anotações

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 RUNDECK

< 525



PROJECTS

+ New Project

5 525

P Primeiro-Projeto

17 Executions [any time](#)

☐ Auto refresh

✓	09/04/2019 6:50 AM Today at 6:50 AM	4 ok	a few seconds	by analista	Verificando Hosts	#152
✓	09/04/2019 5:02 AM Today at 5:02 AM	4 ok	a few seconds	by analista	Verificando Hosts	#151
✗	09/04/2019 4:57 AM Today at 4:57 AM	1 failed	a minute	by analista	Verificando Hosts	#150

Anotações

[illegible]

É possível ver nos logs todas as chamadas de API que o hubot faz, de acordo com a solicitação.

```
[Wed Sep 04 2019 09:44:20 GMT+0000 (UTC)] INFO Looking up Room Name for: XRSPDyv6JbCayEBRW
[Wed Sep 04 2019 09:44:20 GMT+0000 (UTC)] INFO setting roomName: chatops
[Wed Sep 04 2019 09:44:20 GMT+0000 (UTC)] INFO Message sent to hubot brain.
[Wed Sep 04 2019 09:44:20 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:44:20 GMT+0000 (UTC)] INFO Looking up Room ID for: chatops
[Wed Sep 04 2019 09:44:20 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:47:18 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:47:18 GMT+0000 (UTC)] INFO Message receive callback id BkpJfNMWmZapjrs] ts Wed Sep 04 2019 09:47:18 GMT+0000 (UTC)
[Wed Sep 04 2019 09:47:18 GMT+0000 (UTC)] INFO [Incoming] analista: @cybertux rundeck projects automation
[Wed Sep 04 2019 09:47:18 GMT+0000 (UTC)] INFO setting roomName: chatops
[Wed Sep 04 2019 09:47:18 GMT+0000 (UTC)] INFO Message sent to hubot brain.
http://automation-4labs.example:4440/api/12/projects
[Wed Sep 04 2019 09:47:19 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:47:19 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:47:19 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:47:19 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:48:12 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:48:12 GMT+0000 (UTC)] INFO Message receive callback id E6FXtsCWkmuOLC7JX ts Wed Sep 04 2019 09:48:12 GMT+0000 (UTC)
[Wed Sep 04 2019 09:48:12 GMT+0000 (UTC)] INFO [Incoming] analista: @cybertux rundeck 'InfraAgil' jobs automation
[Wed Sep 04 2019 09:48:12 GMT+0000 (UTC)] INFO setting roomName: chatops
[Wed Sep 04 2019 09:48:12 GMT+0000 (UTC)] INFO Message sent to hubot brain.
http://automation-4labs.example:4440/api/12/project/InfraAgil/jobs
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:48:13 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:49:56 GMT+0000 (UTC)] INFO Message received with ID id
[Wed Sep 04 2019 09:49:56 GMT+0000 (UTC)] INFO Message receive callback id Y579s4ydxTPEyBz2t ts Wed Sep 04 2019 09:49:56 GMT+0000 (UTC)
[Wed Sep 04 2019 09:49:56 GMT+0000 (UTC)] INFO [Incoming] analista: @cybertux rundeck trigger 'Verificando Hosts' 'InfraAgil' automa
[Wed Sep 04 2019 09:49:56 GMT+0000 (UTC)] INFO Looking up Room Name for: XRSPDyv6JbCayEBRW
[Wed Sep 04 2019 09:49:57 GMT+0000 (UTC)] INFO setting roomName: chatops
[Wed Sep 04 2019 09:49:57 GMT+0000 (UTC)] INFO Message sent to hubot brain.
http://automation-4labs.example:4440/api/12/project/InfraAgil/jobs
http://automation-4labs.example:4440/api/12/project/InfraAgil/jobs
[Wed Sep 04 2019 09:49:58 GMT+0000 (UTC)] INFO Sending Message To Room: chatops
```

Anotações

- ## Anotações

[illegible]