



COMMUNITY DAY

MÉXICO

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ROAD TO DEVOPS:
FROM SYSADMIN TO CLOUD

Automation 101

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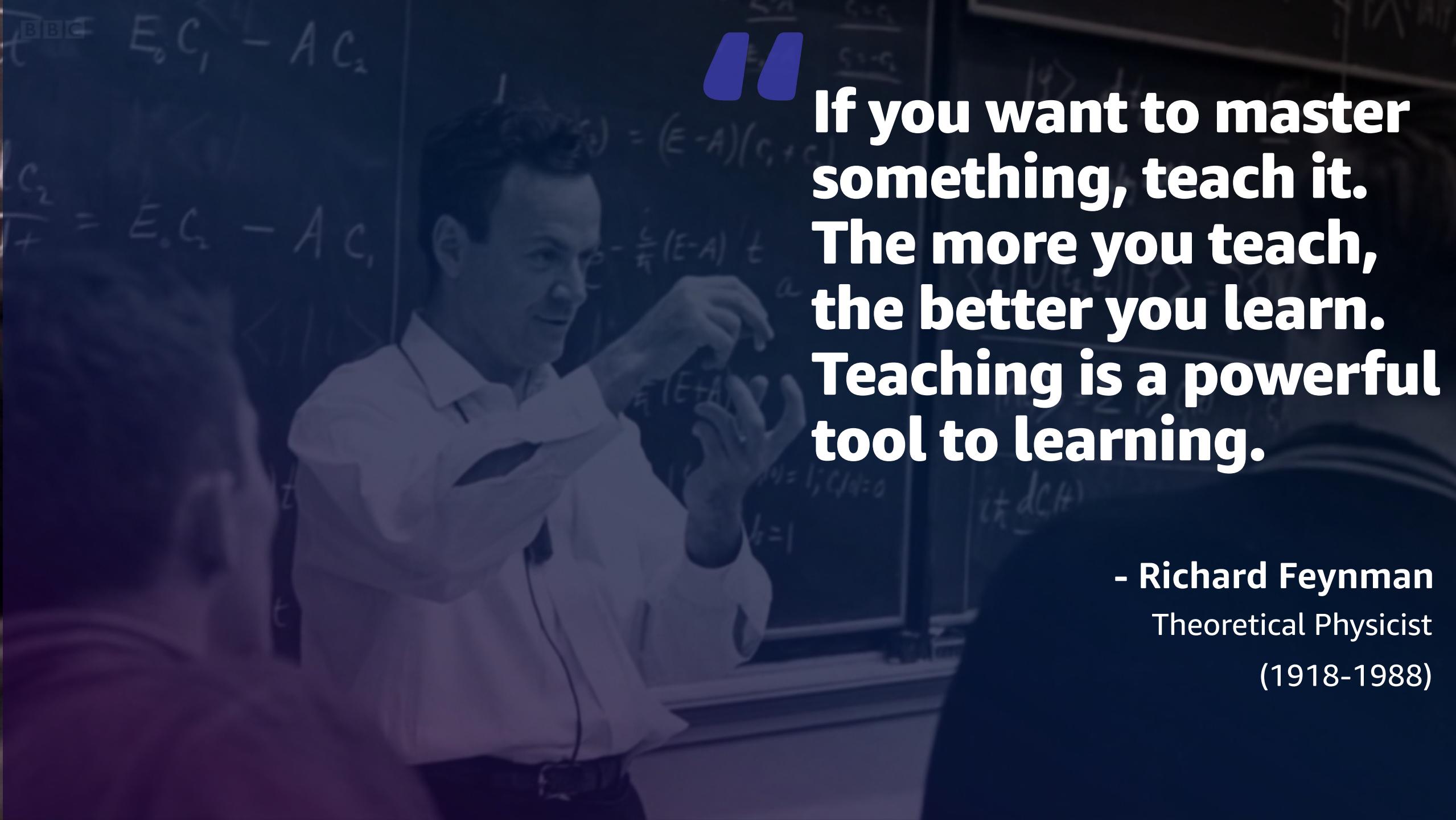
 [rootzilopochtli.com](#)

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 [community.aws/@alexcallejas](#)

 [t.me/fedoramexico](#)

Geek by nature, Linux by choice, Fedora of course!



“

If you want to master something, teach it.
The more you teach,
the better you learn.
Teaching is a powerful
tool to learning.

- Richard Feynman
Theoretical Physicist
(1918-1988)

SysAdmins vs Programmers



Automation 101

SysAdmins: “*If you typed it twice, you should have scripted it once.*”

Principios de la Automatización:

- La regla del **Pensamiento algorítmico**
 - *Todo es un sistema. (Nada sucede por magia).*
- La regla de los **cuellos de botella (bottlenecks)**
 - *Las malas decisiones se propagan.*
- La regla de la **autonomía**
 - *El ser humano siempre desempeña un papel.*

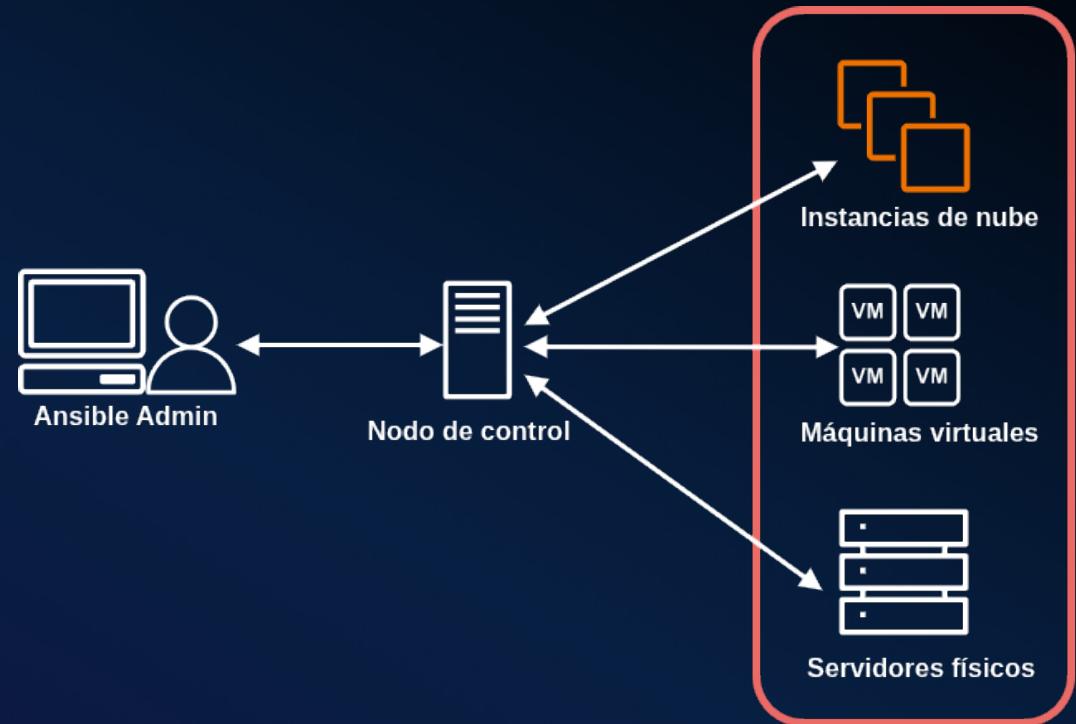


Automation 101

ANSIBLE

Ansible

- Creado en 2012
- Basado en relaciones de confianza con SSH
- Unidades de trabajo:
 - Tasks → *Tarea simple*
 - Plays → *Grupo de tareas*
 - Playbook → *Multiples plays*



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Pre-requisitos

- Lab de pruebas
 - VM con Fedora 42
 - Paquetes:
 - ansible
 - python3-pip
 - python3-boto3
 - python3-botocore
 - awscli2



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Pre-requisitos

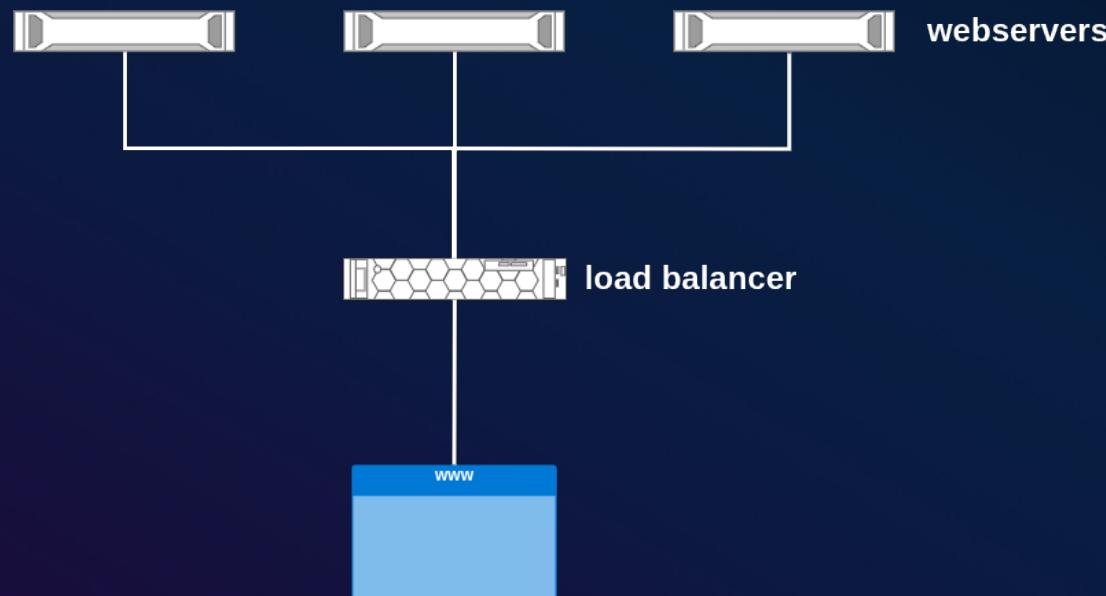
- Environment
 - Crear llave ssh y configurar ssh-agent
 - `$ ssh-keygen -b 521 -t ed25519 -f automation-101`
 - `$ ssh-copy-id -i automation-101.pub root@localhost`
 - `$ ssh-agent bash`
 - `$ ssh-add automation-101`
 - Configurar perfil AWS
 - `$ aws configure --profile alex`
 - `$ aws ec2 describe-instances --profile alex`



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Creating a load-balanced web service on cloud with Ansible

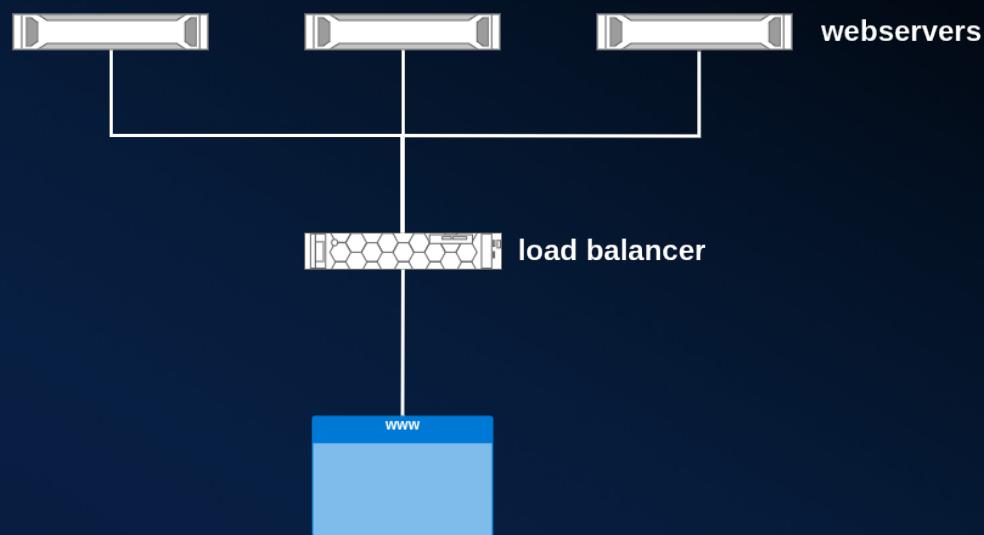
- <https://www.redhat.com/en/blog/creating-load-balanced-web-service-cloud-ansible>



Automation 101

Servicio: Ansible playbooks

1. Una regla de **firewall** que permita el *tráfico http* a nuestras instancias.
2. Tres instancias Linux configuradas como web servers.
3. Un **balanceador de carga** configurado como *round-robin*.



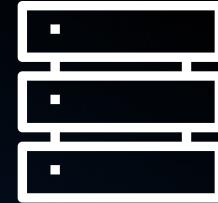
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Instancias: Ansible role

- Instale y habilite **apache** y **firewalld**
- Configure **apache** con una *página de inicio que muestre la dirección IP de cada instancia de AWS*
- Abra el puerto **80** (**http**)
- Reinicie **apache** y **firewalld** para confirmar la configuración.

```
apache_indexhtml.j2

<html>
<head><title>Apache is running!</title></head>
<body>
<h1>
Hello from {{ inventory_hostname }}
</h1>
</body>
</html>
```



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Code

Workdir

```
$ tree workdir/  
workdir  
├── alex.accessKeys.csv  
├── ansible.cfg  
├── automation-101  
├── automation-101.pub  
├── aws-test.yml  
└── inventory
```

1 directory, 6 files

Ansible role

```
$ tree myapache/  
myapache/  
├── defaults  
│   └── main.yml  
├── handlers  
│   └── main.yml  
├── meta  
│   └── main.yml  
├── README.md  
├── tasks  
│   └── main.yml  
├── templates  
│   ├── apache_httpdconf.j2  
│   └── apache_indexhtml.j2  
├── tests  
│   └── inventory  
│       └── test.yml  
└── vars  
    └── main.yml
```

7 directories, 10 files

Ansible playbooks

```
$ tree ansible-aws-apache-lb/  
ansible-aws-apache-lb/  
├── ansible.cfg  
├── aws-apache.yml  
├── aws-clean.yml  
├── aws-lb-apache.yml  
├── aws-lb.yml  
└── inventory
```

0 directories, 7 files

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Demo Time!



Road to DevOps: From SysAdmin to Cloud

Creating a Load Balanced Web Service on Cloud with
Ansible

Alex Callejas
Technical Account Manager | CEE México
June, 2018

Referencias

- **Creating a load-balanced web service on cloud with Ansible**
- <https://www.redhat.com/en/blog/creating-load-balanced-web-service-cloud-ansible>
- **Amazon.Aws - Ansible community documentation**
- <https://docs.ansible.com/ansible/latest/collections/amazon/aws/index.html>
- **Amazon Web Services Guide - Ansible community documentation**
- https://docs.ansible.com/ansible/latest/collections/amazon/aws/docsite/guide_aws.html
- **Ansible – GitHub Repo**
- <https://github.com/ansible>



<https://github.com/rootzilopochtli/aws-automation-101>



AWS Automation 101

GitHub repo



¡Gracias!

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X @dark_axl

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Por favor, completa la
encuesta de la sesión.