MICROSERVICES, CONTAINERS AND KUBERNETES

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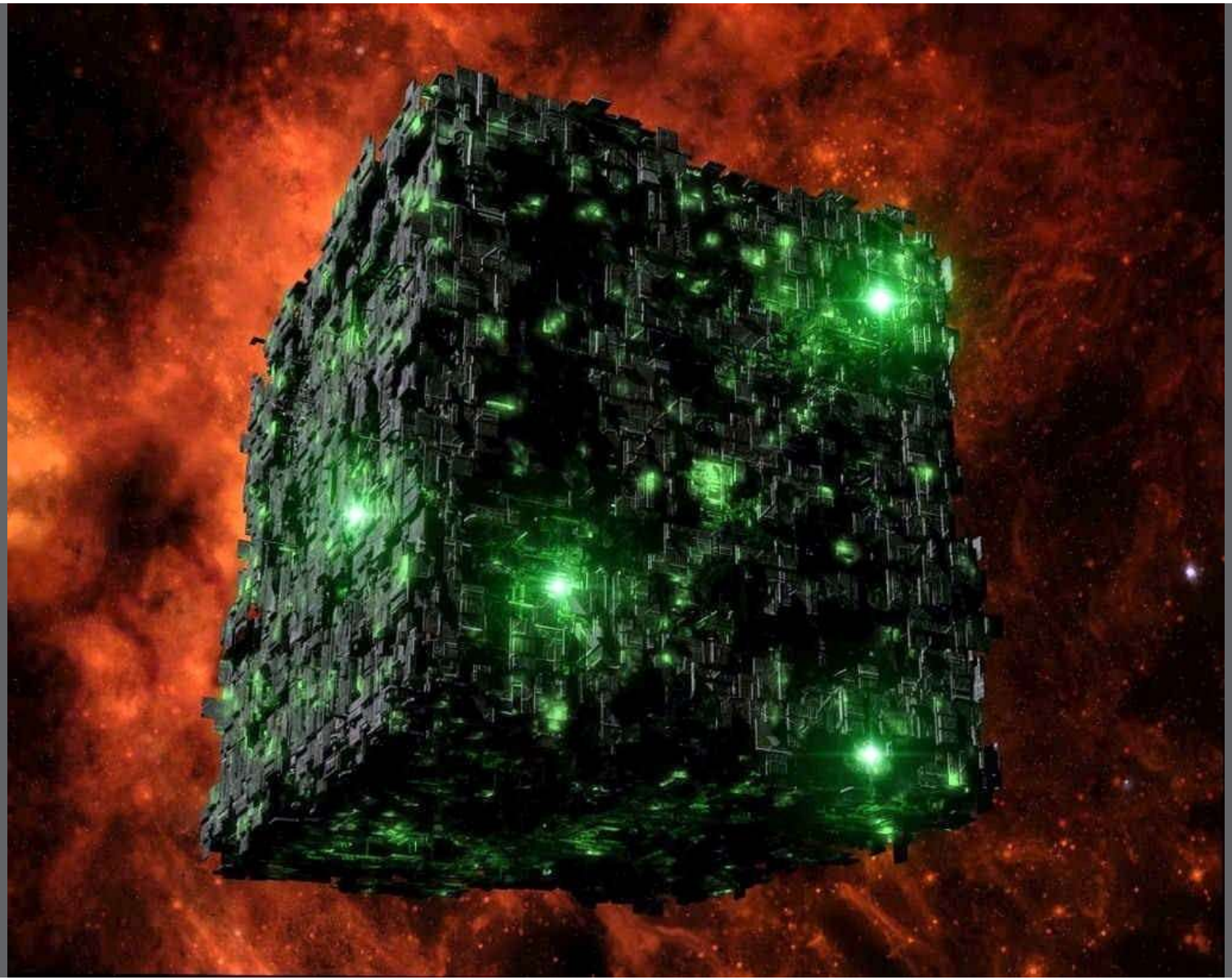
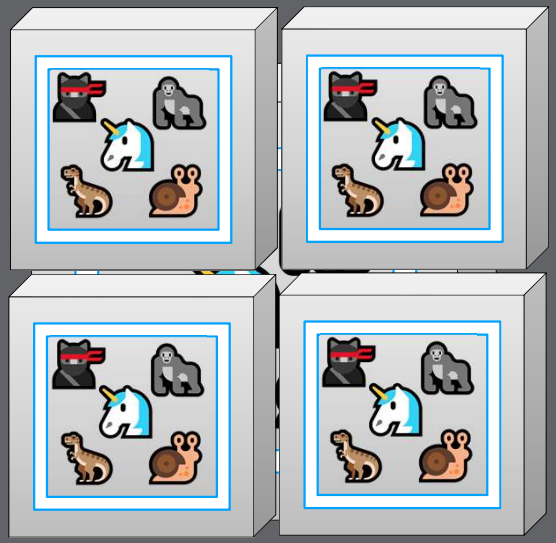
#GX28

The power of doing.



WHAT IS MICROSERVICES?

Monolithic



Microservices

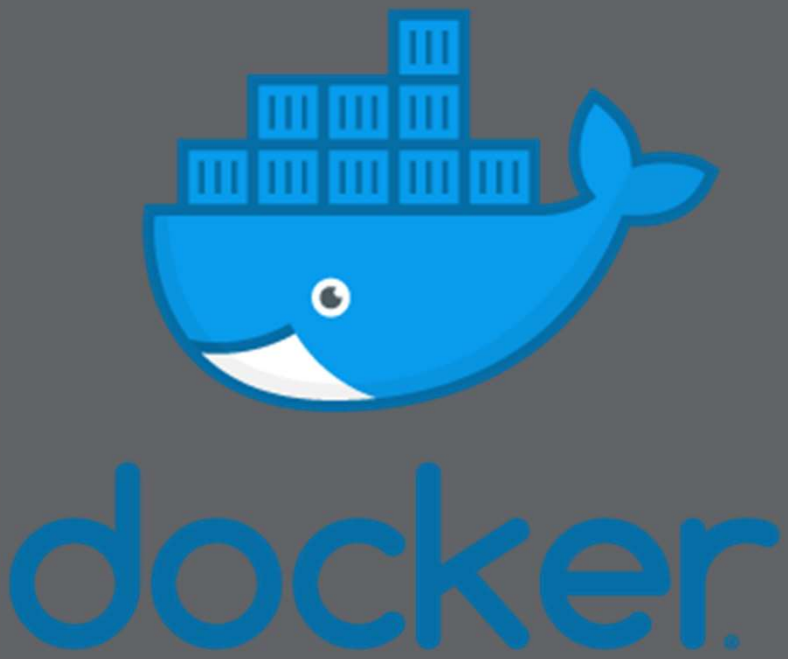
Conway's Law

Monolithic

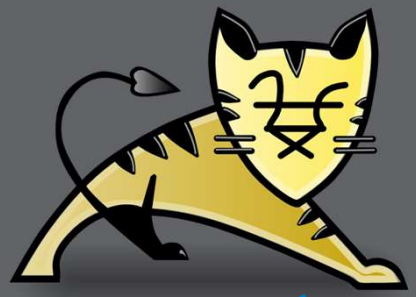
Microservices

The team

Autonomous
Size: 2 pizzas
Pick tech stack (including DBMS)
Continuous delivery
“You build it, you run it”
Prepare for chaos



The power of doing.



```
vivek@nas01:~$ printenv
TERM=xterm-256color
SHELL=/bin/bash
XDG_SESSION_COOKIE=9ee90112ba2cb349f07bfe2f00002e46-1381581541.324726-906214464
SSH_CLIENT=192.168.1.6 60190 22
SSH_TTY=/dev/pts/1
USER=vivek
MAIL=/var/mail/vivek
PATH=/usr/local/bin:/usr/bin:/bin:/usr/local/games:/usr/games
PWD=/home/vivek
LANG=en_IN
SHLVL=1
HOME=/home/vivek
LANGUAGE=en_IN:en
LOGNAME=vivek
SSH_CONNECTION=192.168.1.6 60190 192.168.1.10 22
_=/usr/bin/printenv
vivek@nas01:~$
```

The power of doing.

actually... no

dockerfile

build

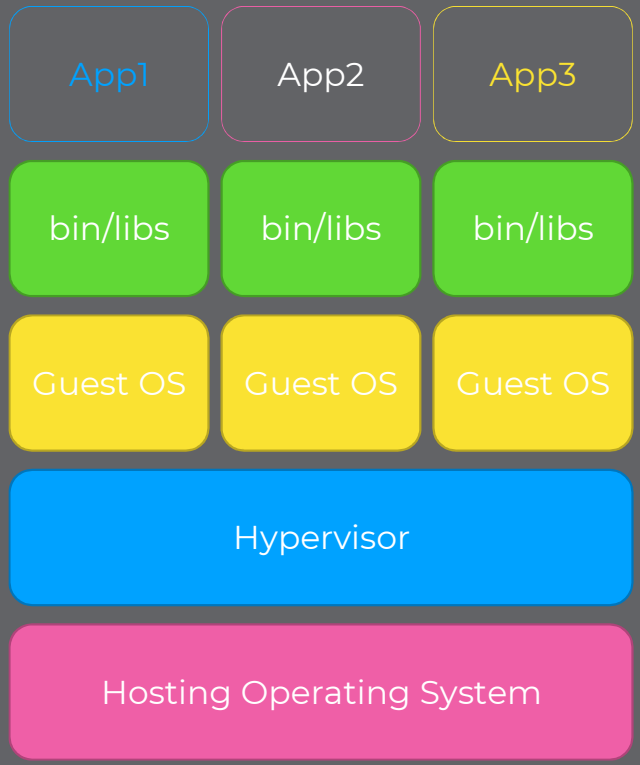
image

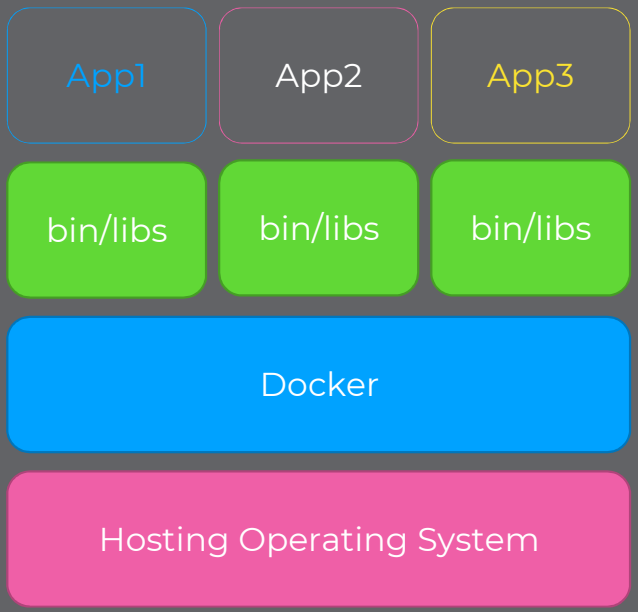
run

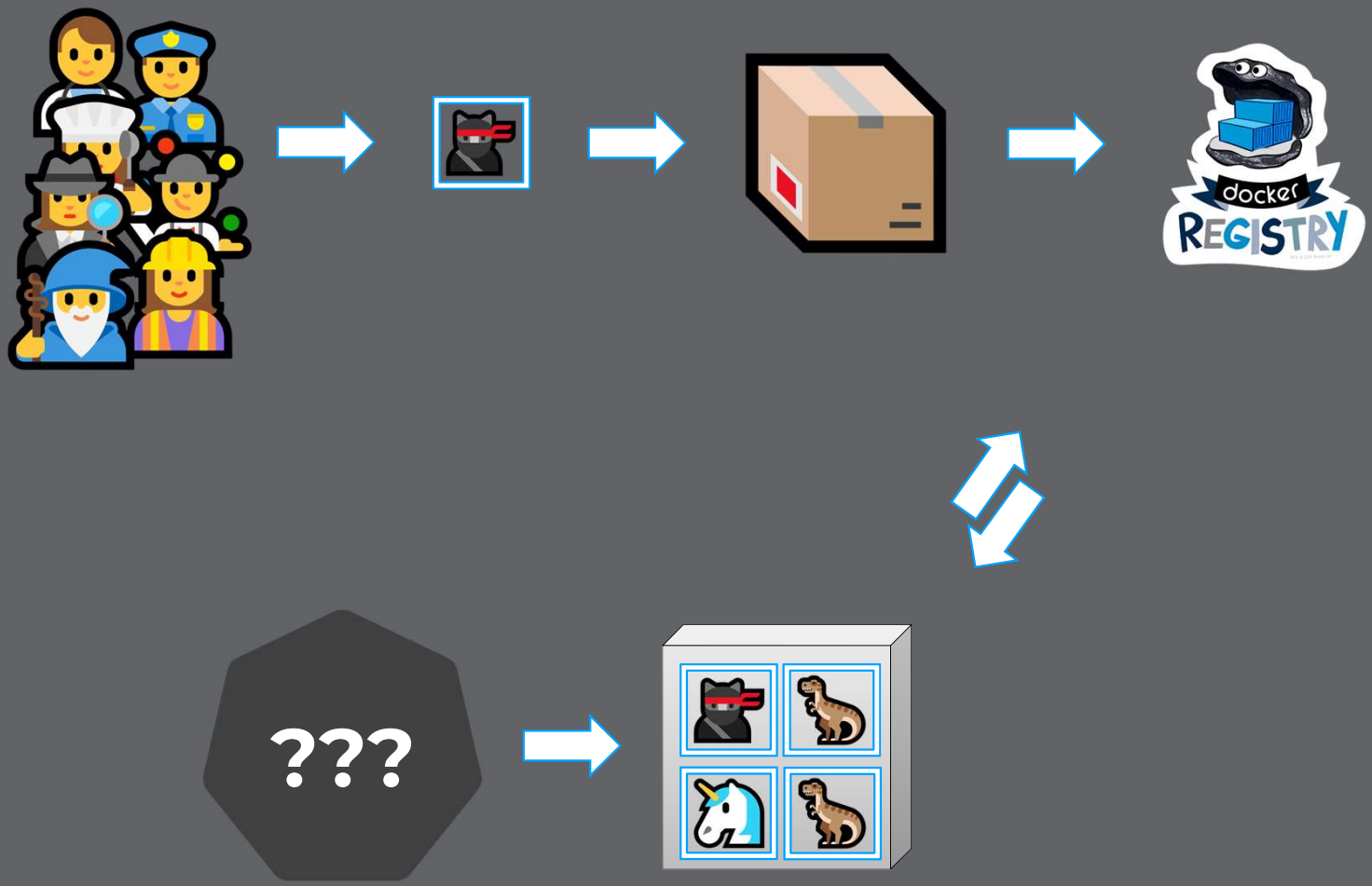
container

```
# Dockerfile generated by GeneXus (.NET Core)
FROM microsoft/dotnet:2.1.1-aspnetcore-runtime
LABEL maintainer="seba gomez <sgomez@genexus.com>"
ENV GXAPPVERSION=v1
WORKDIR /app
COPY ["GX28/20180923122144", "/app"]
ENTRYPOINT ["dotnet", "bin/GxNetCoreStartup.dll"]
```

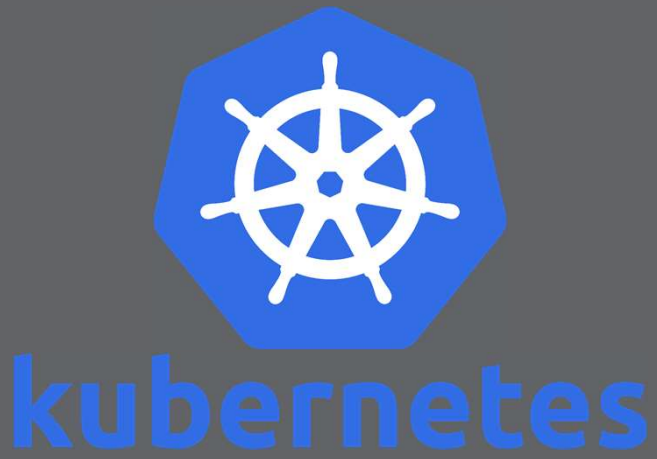
VMs vs Containers

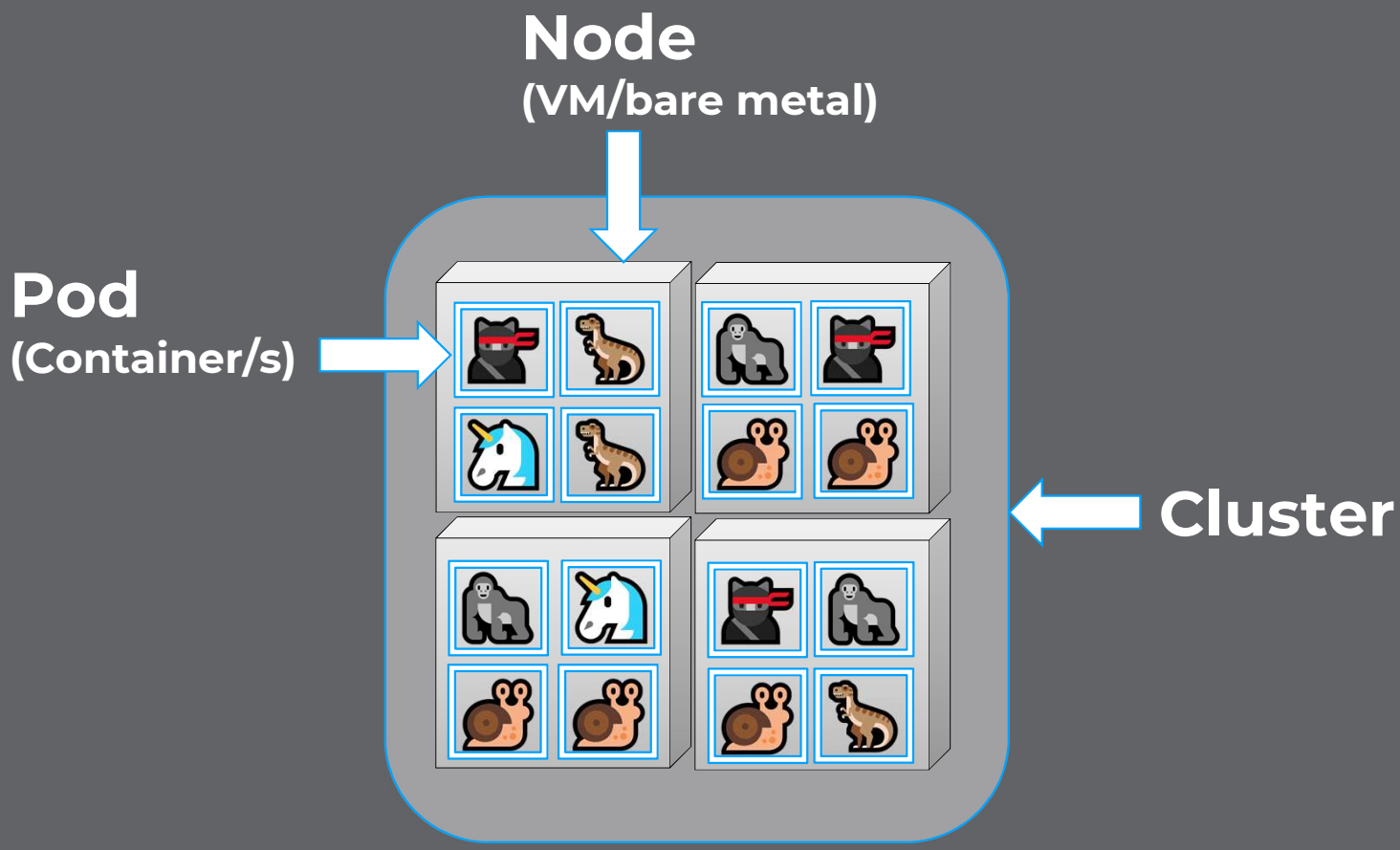






The power of doing.


kubernetes


Node
(VM/bare metal)
Pod
(Container/s)
Cluster

YOU DESCRIBE A *DESIRED STATE* IN A DEPLOYMENT OBJECT

```yaml
apiVersion: extensions/v1beta1
kind: Deployment
metadata:
  name: gx28k8sdemo
  labels:
    gx: "28"
spec:
  replicas: 5
  selector:
    matchLabels:
      gx: "28"
  template:
    metadata:
      labels:
        gx: "28"
    spec:
      containers:
      - name: gx28k8sdemo
        image: sebagomez/gx28k8sdemo:v1
        ports:
        - containerPort: 80
```

```yaml
apiVersion: v1
kind: Service
metadata:
  name: gx28k8sdemo-service
  labels:
    gx: "28"
spec:
  selector:
    gx: "28"
  type: NodePort
  ports:
  - protocol: TCP
    port: 80
    targetPort: 80
```

DEMO!

http://bit.ly/gx28k8s

Thank you

@sebagomez

The power of doing.

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