

A MODERN APPROACH TO VDI

Geoffrey Papaux, May 19, 2022

22nd Fribourg Linux Seminar

ABOUT ME



- Master in Computer Science (here at HEIA-FR)
- 5 years of embedded system development (Linux/C++)
- 3 years of data processing (Kafka/Scala/Golang/...)
- Using a VDI on a daily basis

<https://github.com/papaux>
<https://linkedin.com/in/gpapaux>

AGENDA

- Definition and history
- Architecture
- Benefits and drawbacks
- Available solutions
- Demo

VDI ?

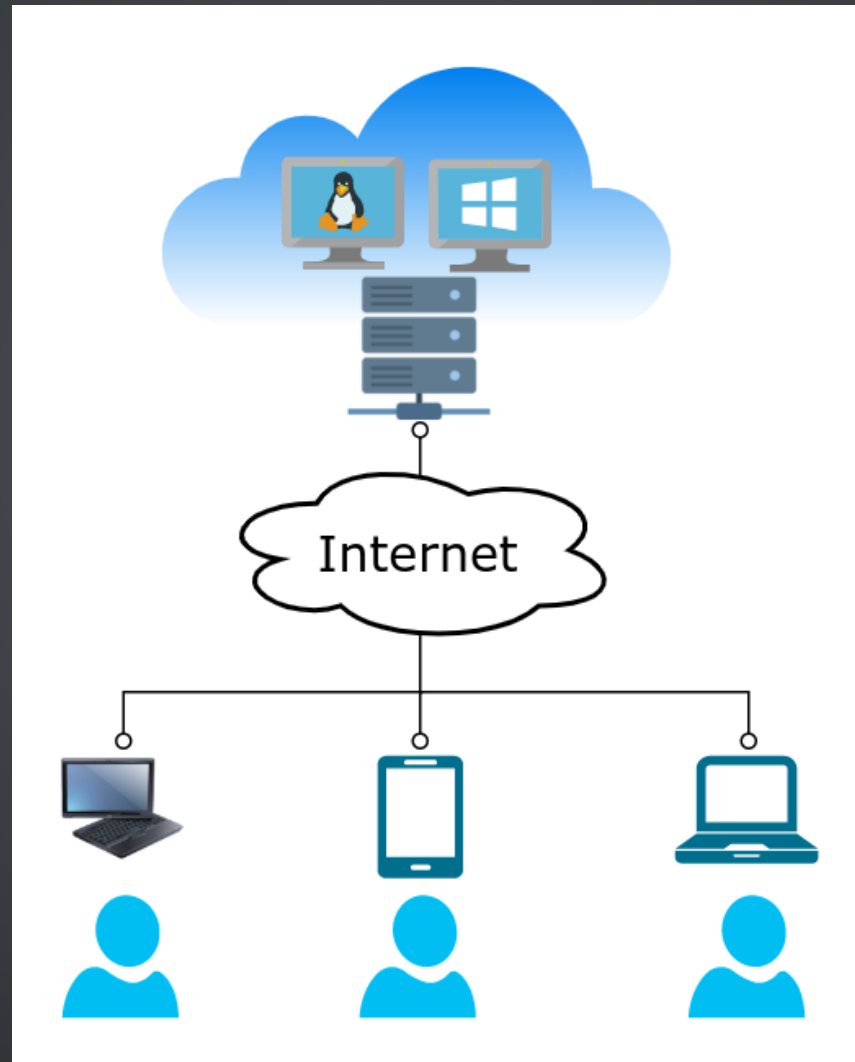


VDI

VIRTUAL DESKTOP INFRASTRUCTURE

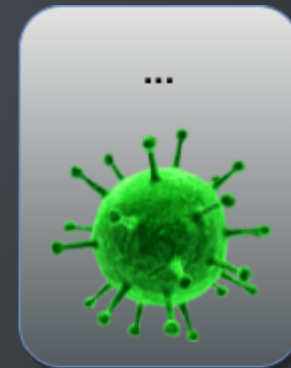
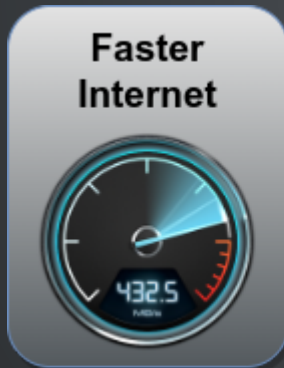
Set of technologies for hosting and accessing virtual remote computers.

OVERVIEW



HISTORY

- An old idea: **VDI alliance** created in 2006 by VMware ([link](#))
 - 20+ companies including Citrix, HP, IBM, Sun
- Recently revisited thanks to...



GOOGLE TRENDS "VIRTUAL DESKTOP"

Interest over time

Google Trends

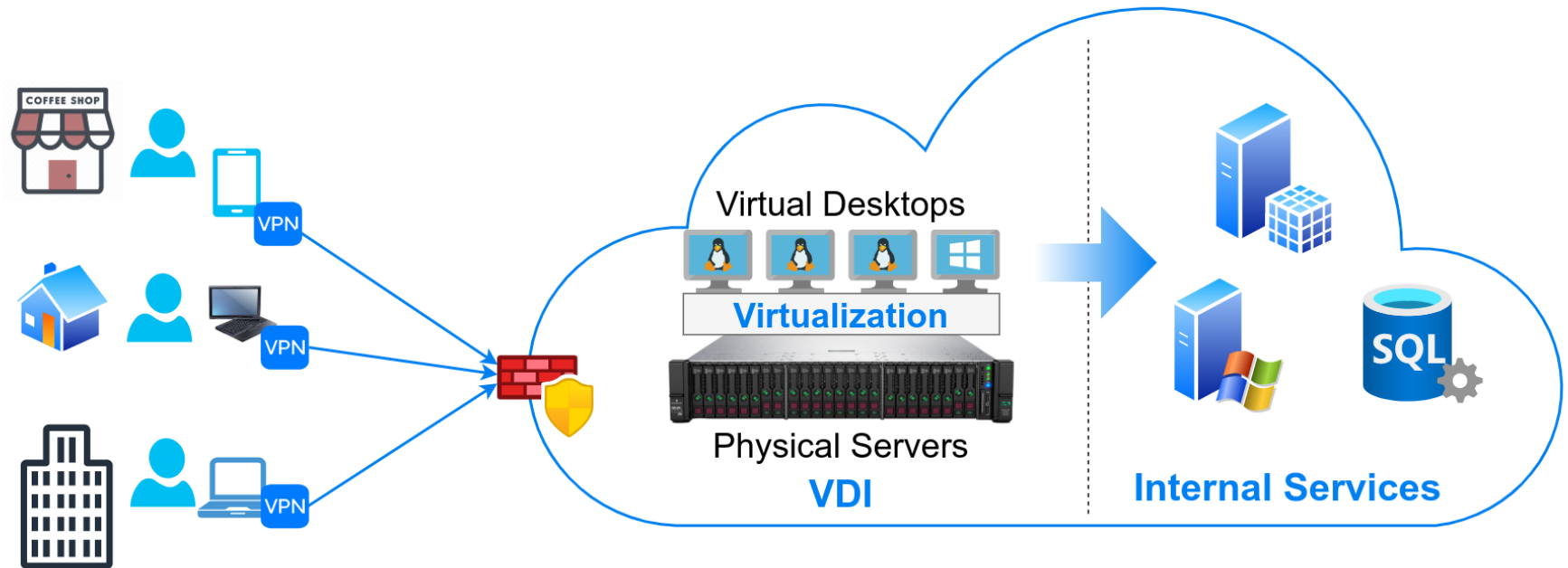
● virtual desktop

March
2020



Worldwide. 1/28/19 - 3/28/22. Web Search.

VDI ARCHITECTURE



BENEFITS

1. Access from anywhere and from any device (WFH Nirvana!)
2. Security and isolation
3. IT Management
4. Happier developers (if done right)

DRAWBACKS

When the lag is real



LATENCY IS YOUR ENEMY!

DRAWBACKS

1. Network requirements (client & server !)
2. Single point of failure (laptops are useless without VDI)
3. Dedicated and trained IT staff
4. Harder to access to local hardware (USB, Serial, ...)

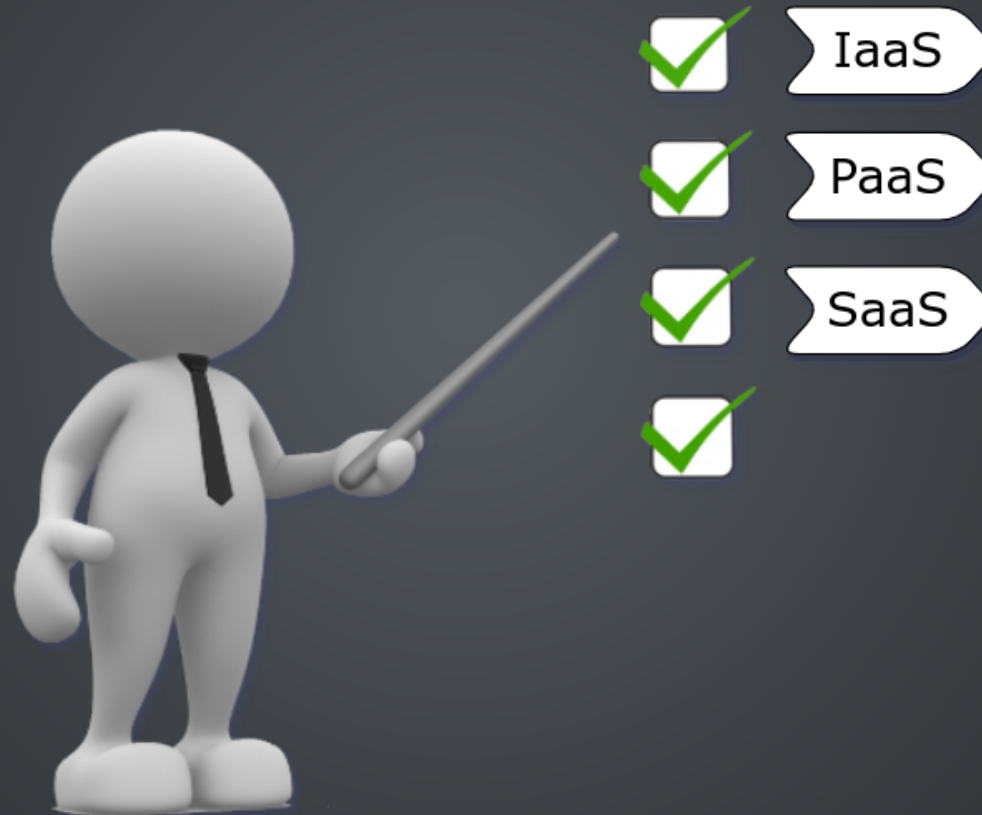
COST ?

Commercial offerings advertise lower costs. Is it really true ?

- + No need for powerful laptops/workstations
- + Optimize hardware usage
- Upfront server cost (or monthly cloud fees)
- IT staff and training
- Licensing & support

WHAT'S NEW ?

FOLLOWING THE TREND



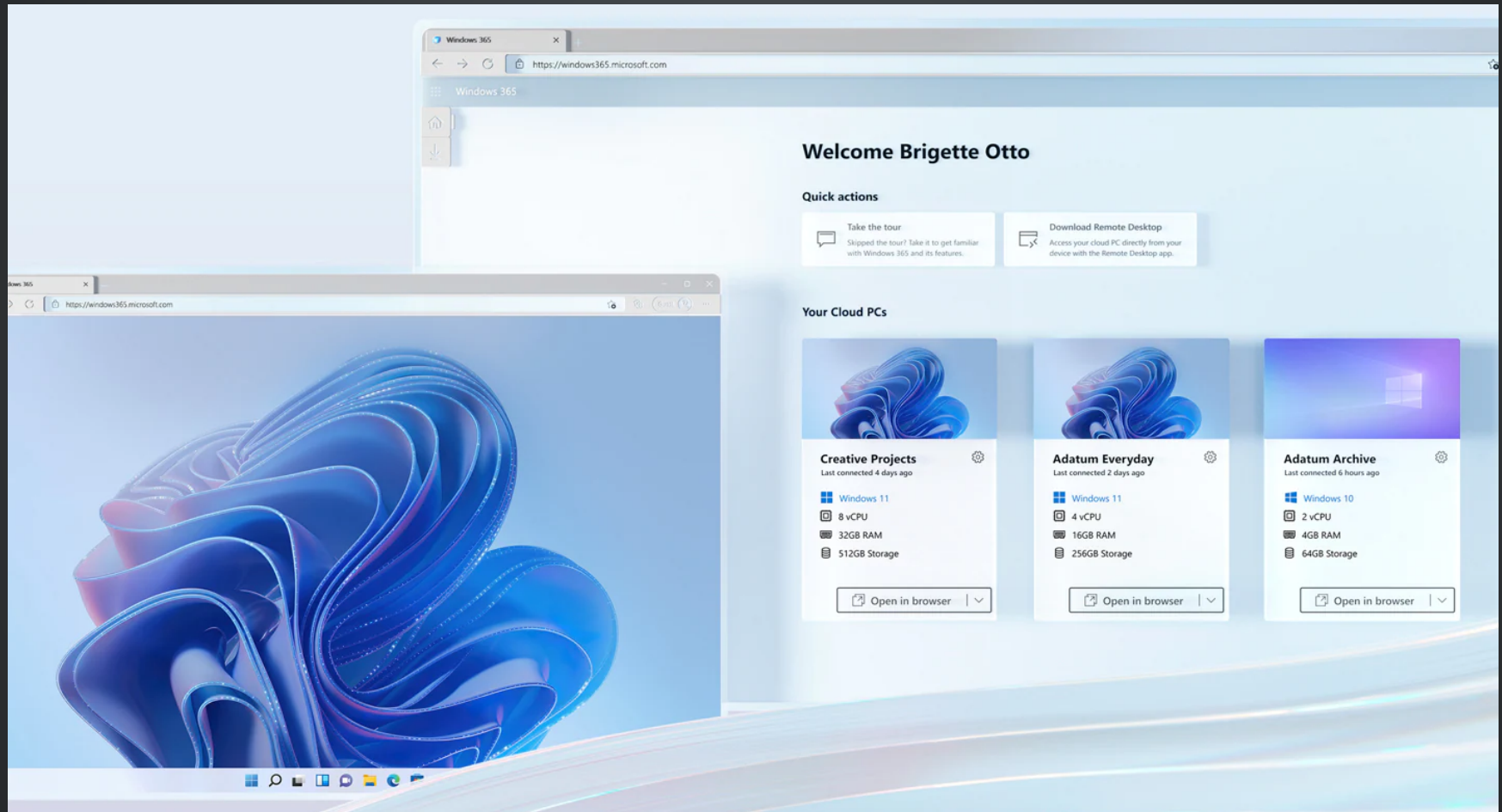
MEET DAAS



- ☒ IaaS
- ☒ PaaS
- ☒ SaaS
- ☒ DaaS

Desktop as-a-Service

WINDOWS 365



4 vCPU, 16GB RAM, 256GB SSD => \$54 / month

SHADOW



8 vCPU, 12GB RAM, 256GB SSD, GTX 1080 => CHF 34.99 / month

RECAP: OPTIONS FOR VDI

	On-Premise	Cloud	DaaS
Hardware	Own it	Rent it	Rent it
Software	Own it	Own it	Rent it

=> A lot of options, commercial and Free/OpenSource !

DEMO

LET'S SETUP A "CLOUD" VDI!



TECHNOLOGIES

Terraform



Infrastructure
as Code

OpenStack



Infrastructure
as a Service

VScode



Remote
Development

NoMachine



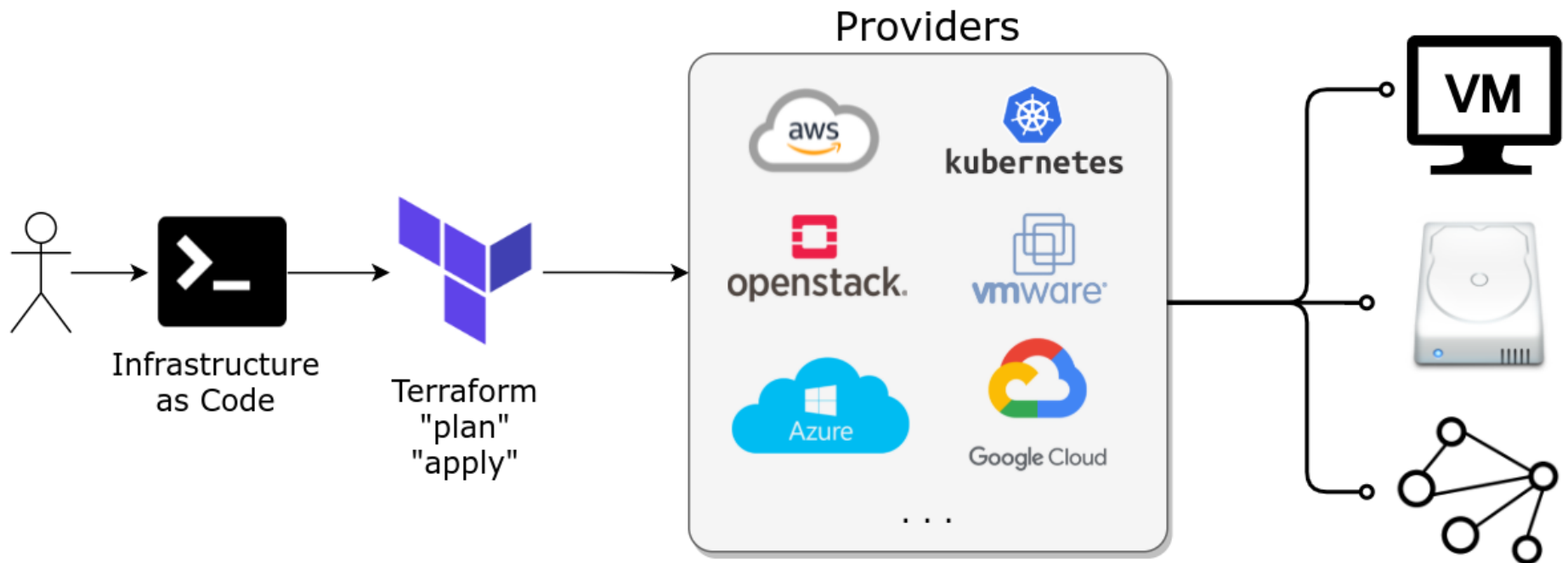
Remote
Desktop

TERRAFORM



HashiCorp

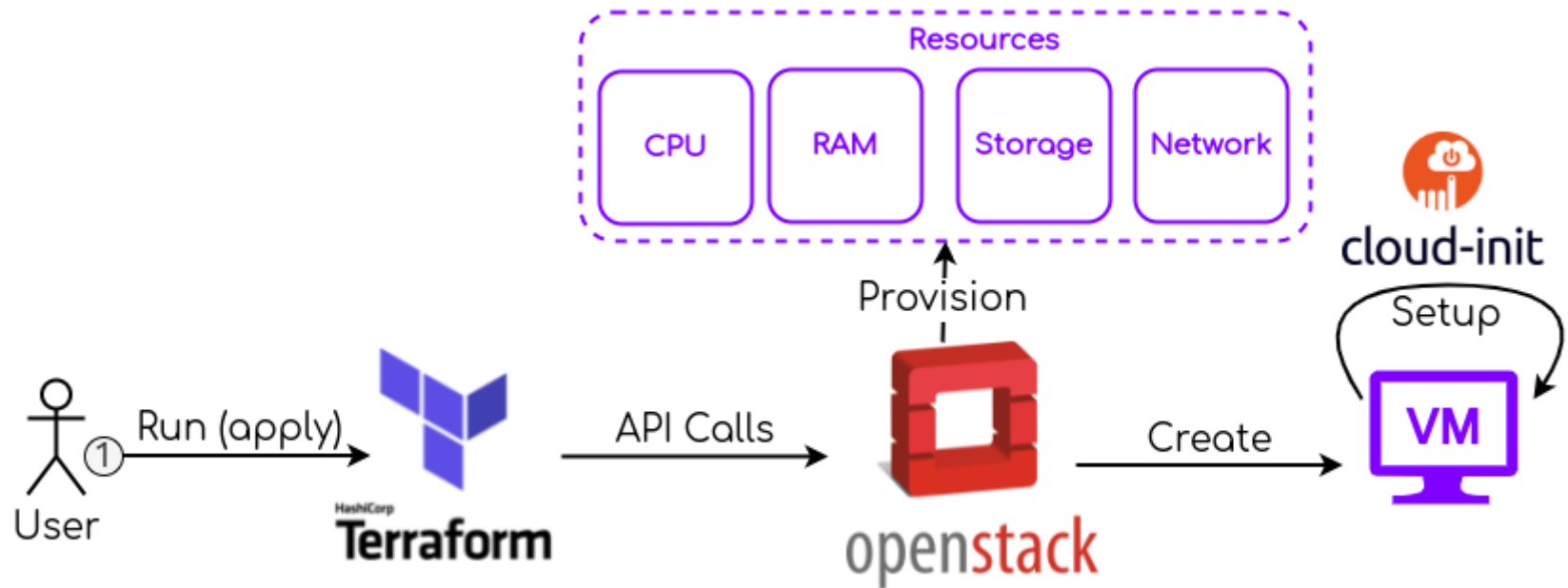
Terraform



DEMO

LET'S RUN IT!

WHAT HAPPENED ?



Slides and code:

<https://github.com/papaux/vdi-heiafr>

Image and animation sources:

<https://www.anyrgb.com>

<https://tenor.com>