La Minute CLOUD de JULES & LÉA

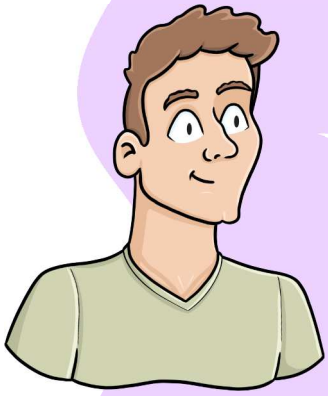
Azure Container Registry #1

Today we are going to talk about **Azure Container Registry (ACR)**. It's a registry used to store container images.

Like **Docker Hub** ?

Exactly.

And ACR is based on the open source **Docker** registry v.2.0.



With all containerization solutions offered by Azure, it's a great thing to have a registry offering.

Yes, especially because you can use it with services like **Azure Kubernetes Service**, or **Azure Container Apps** to name a few.

You can also use it with locally deployed orchestrators like **Kubernetes** or **Docker Swarm**.

Awesome!

In addition,

ACR is used to store **images** and their **artifacts**, like files, libraries, ..., useful to work properly.

I also heard about ACR Tasks?!

ACR Tasks allows you,

to **generate images** when the code has been validated on GitHub,

or **recreate images** automatatically when the base images are up to date,

but also to **create specific tasks**, such as to automate the creation, testing and correction of images.

Cool, this allows you to **manage** the entire **life cycle** of your images.

Yes it is.

Today, ACR proposes 3 service tiers with **Basic**, **Standard** and **Premium tier**.

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Azure Container Registry #2

And how does it work exactly?

It's very simple, as always!

You deploy a new registry, you define the type of network access you want and that's it!

That's all?

Yes !

Of course, when you push your image, you must define a **repository**, it's where your images will be stored, and of course a **tag** in order to version your image.

In fact, it is rather simple as operation!

Hmm, another question,

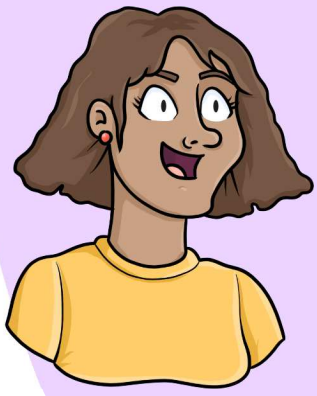
If i have an **ACR in multiple régions**, will I need to push my image to each of them?

No, don't worry, the product team has thought of everything.

ACR offers a **geo-replication** option that takes care of synchronizing your images between the different regions that you have configured..

Got it!

But what happens if I want to deploy to a region where my image is not yet synchronized?



Excellent question !

Thanks to the **Webhooks** concept.

Webhooks??

This is what makes it possible to **trigger an action following an event**.

A Webhook is responsible for performing the **docker push** command, into the secondary region.

Then, it notifies your application that a new image is available to be deployed.

Brilliant.

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And in terms of security?

So, you can expose or not your ACR to internet, but also consume it through a **Private Endpoint**.

It's cool. And in terms of image protection?

They are obviously **encrypted at rest**.

Either using your own encryption key, or using the one provided by Microsoft.

And I guess that they are encrypted **in transit** via the **HTTPS** protocol.

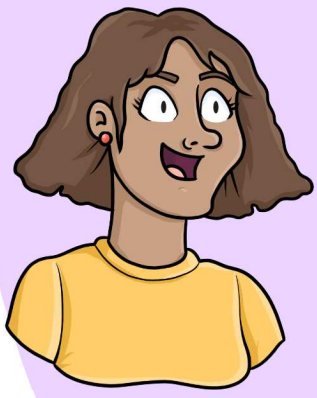
Of course!

Authentication to the registry can be achieved by a **login/ password combination**, or via **RBAC**, which is very useful when deployments are automated with **CI/CD Workflows.**

Hum, I hadn't thought of that.

You can also protect ACR with **Microsoft Defender for Cloud**.

This will allow you, among other things, to **analyze** your images for **security vulnerabilities.**



It's great, because we can sometimes forget the **life cycle** and **updates** of existing images.

Excellent remark.

ACR is the perfect buddy when you use a container solution in Azure.

This allows you to **centralize** everything in one place, which greatly **simplifies management** and **security**.

End

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Thank you!

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See you soon!

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