DevBox vs Codespaces

la battaglia per l'ambiente di sviluppo perfetto!

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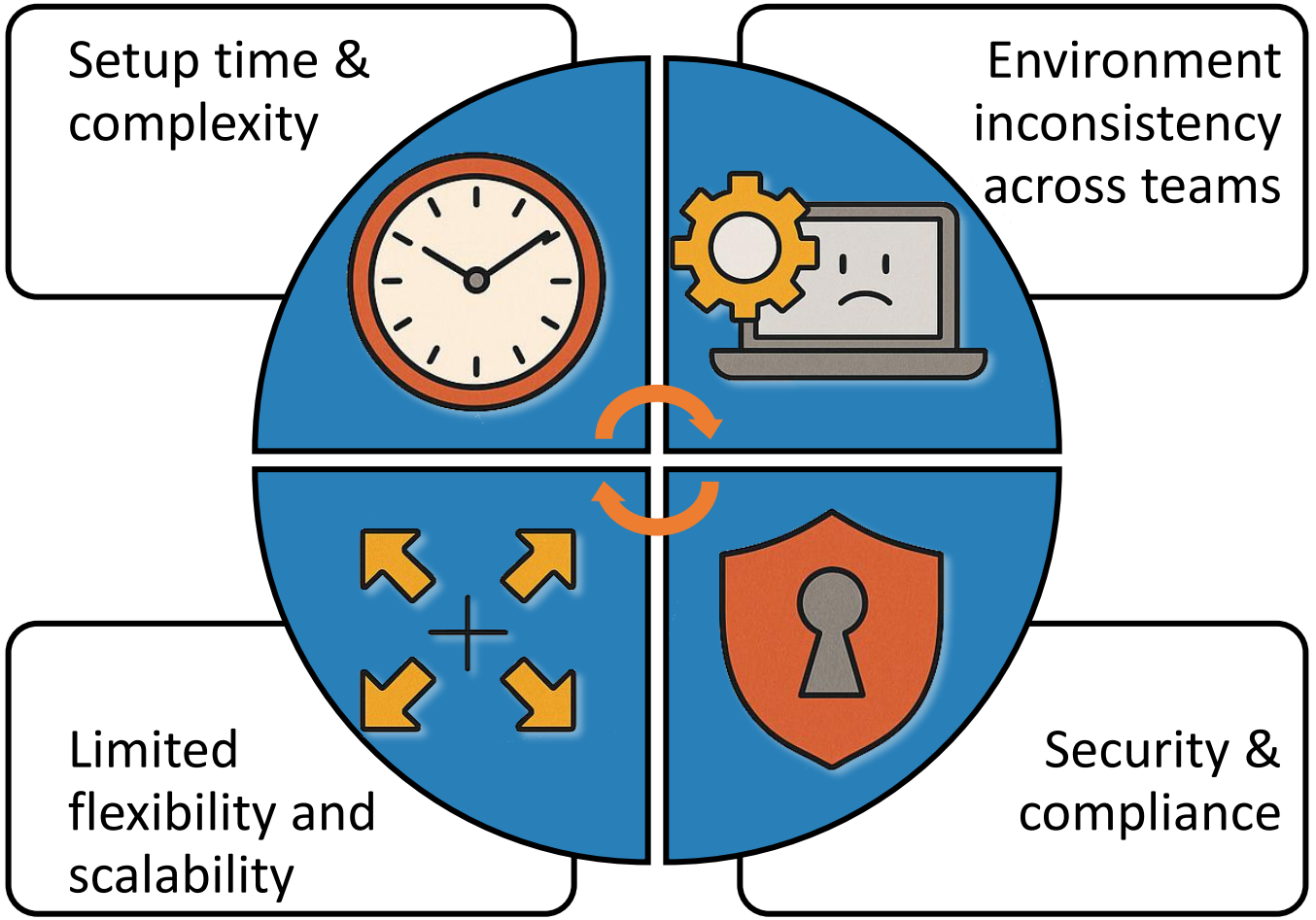
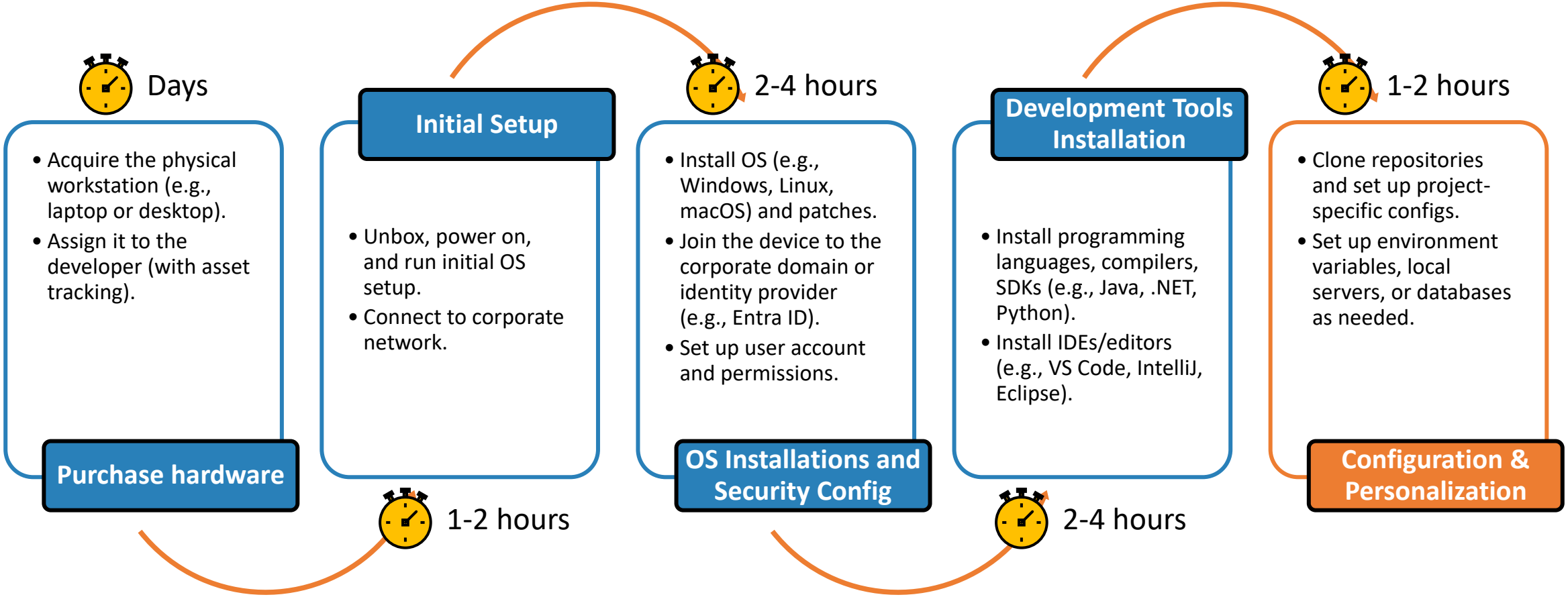
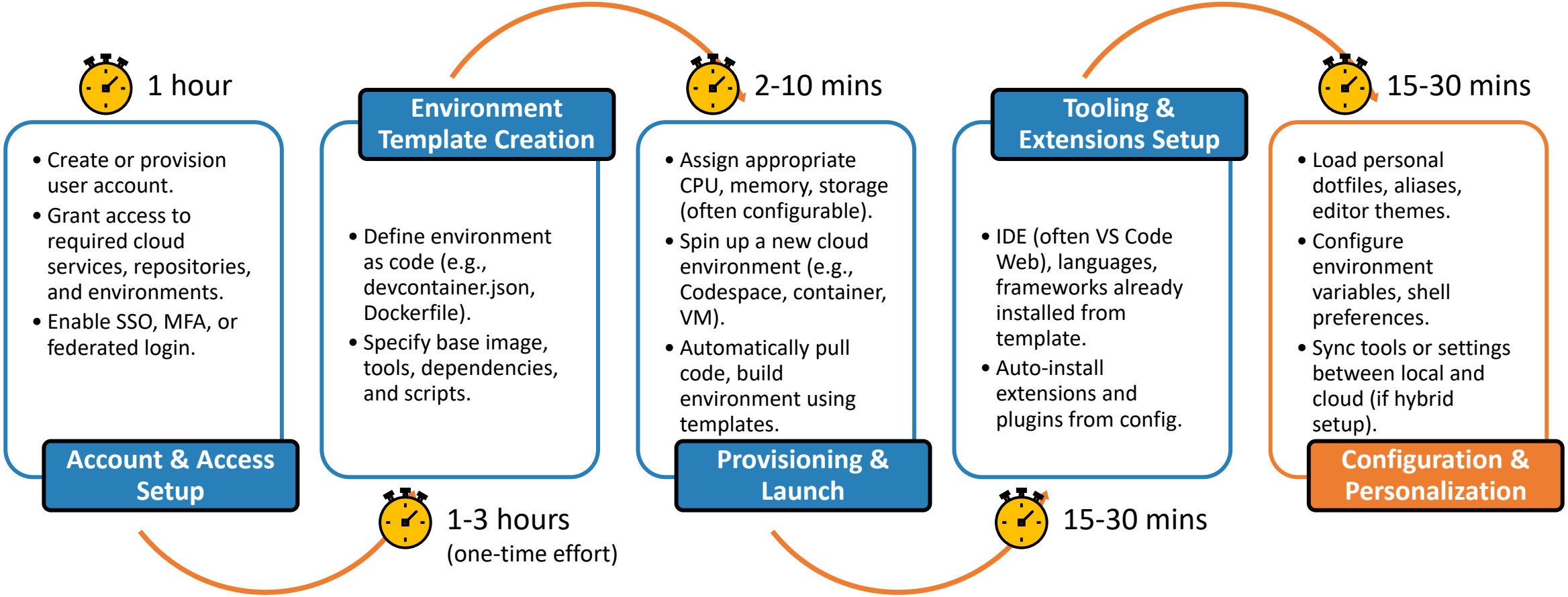
Challenges of Traditional Dev Environments



Challenges of Traditional Dev Environments

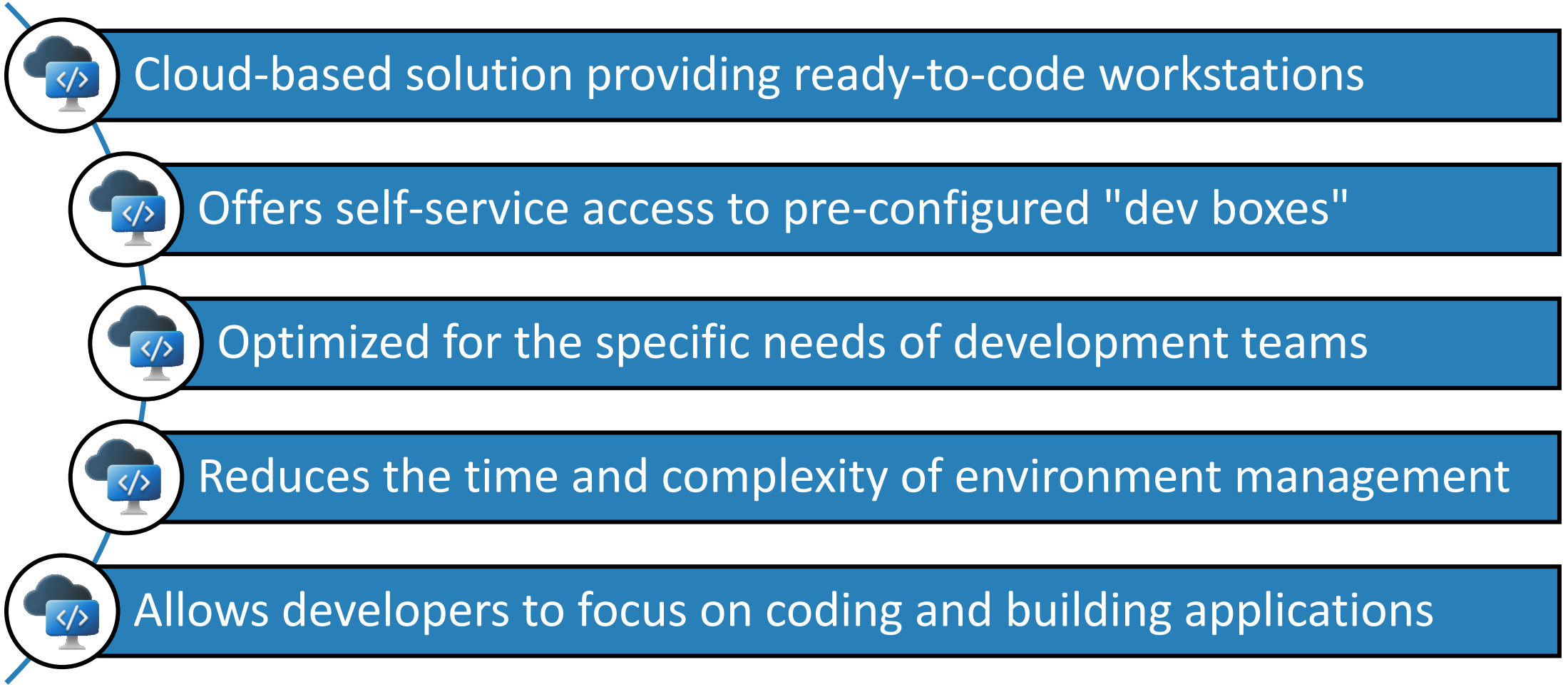


Cloud-Based Dev Environment Provisioning



Microsoft DevBox

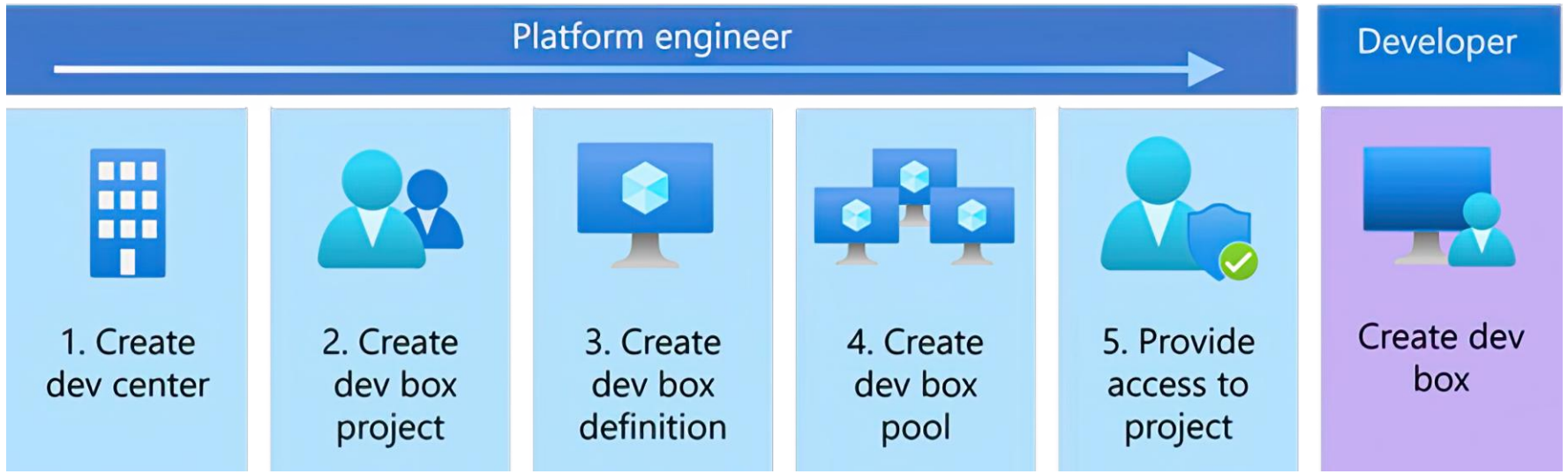
Introducing Microsoft DevBox



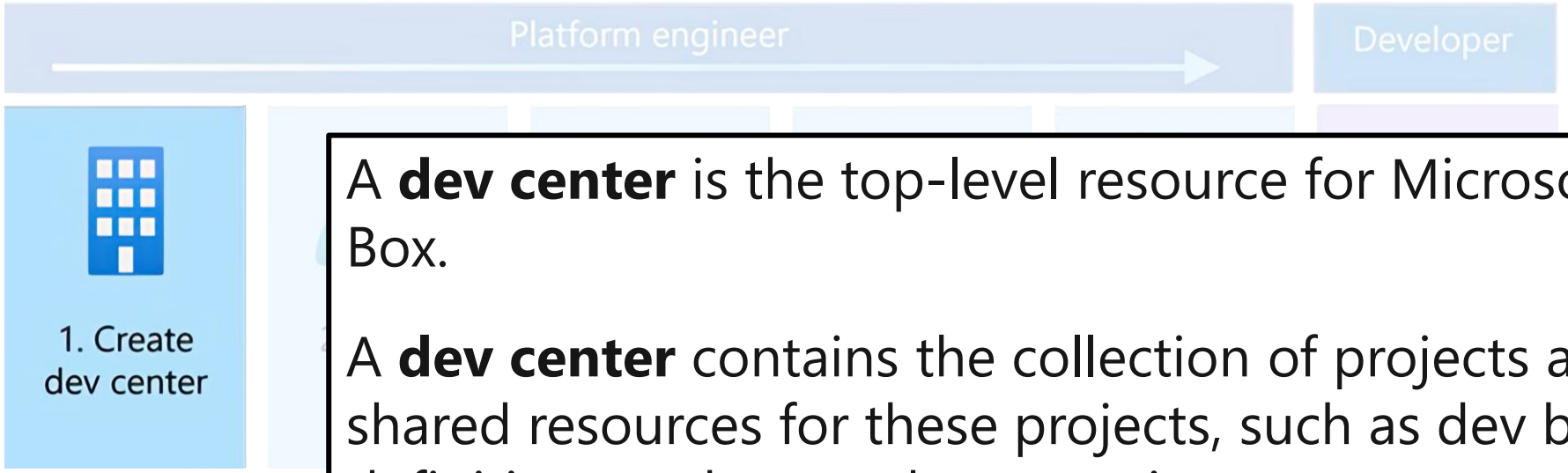
Prerequisites

- An Azure account with an active subscription.
- Owner or Contributor role.
- Microsoft Entra ID.
- User licenses for Windows 11/10 Enterprise and Microsoft Entra ID.
- Register the *Microsoft.DevCenter* resource provider

Configure Microsoft DevBox



Configure Microsoft DevBox



A **dev center** is the top-level resource for Microsoft Dev Box.

A **dev center** contains the collection of projects and the shared resources for these projects, such as dev box definitions and network connections.

There's no limit on the number of dev centers that you can create, but most organizations need only one.

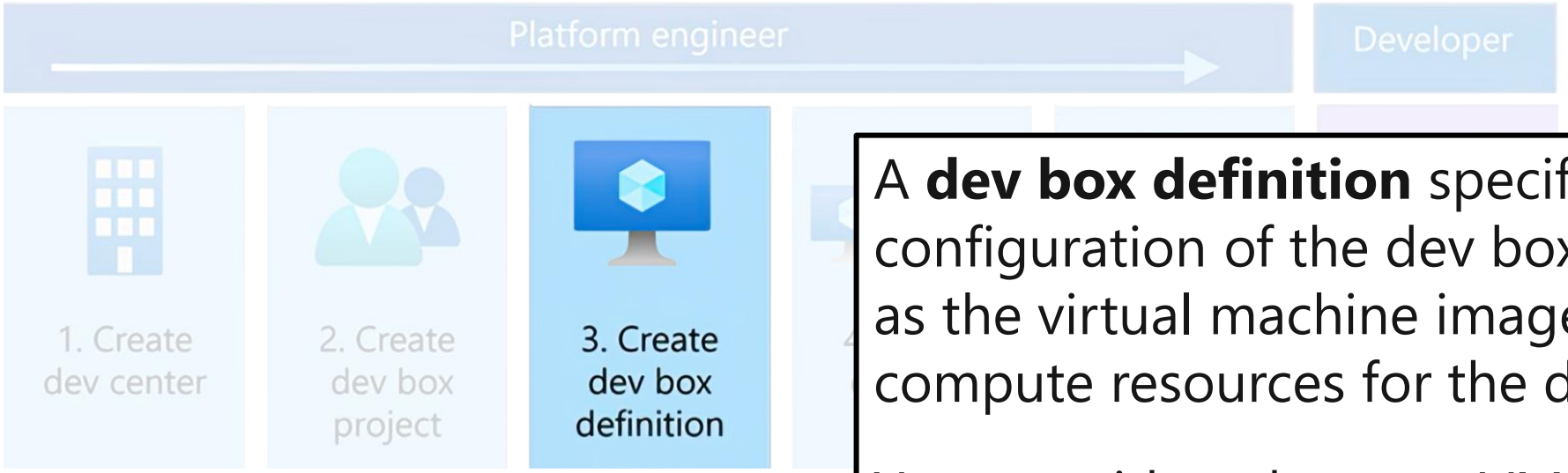
Configure Microsoft DevBox

A dev box **project** is the point of access for development teams.

You assign a developer the Dev Box User role to a **project** to grant the developer permissions to create dev boxes.

You can create one or more **projects** in a dev center.

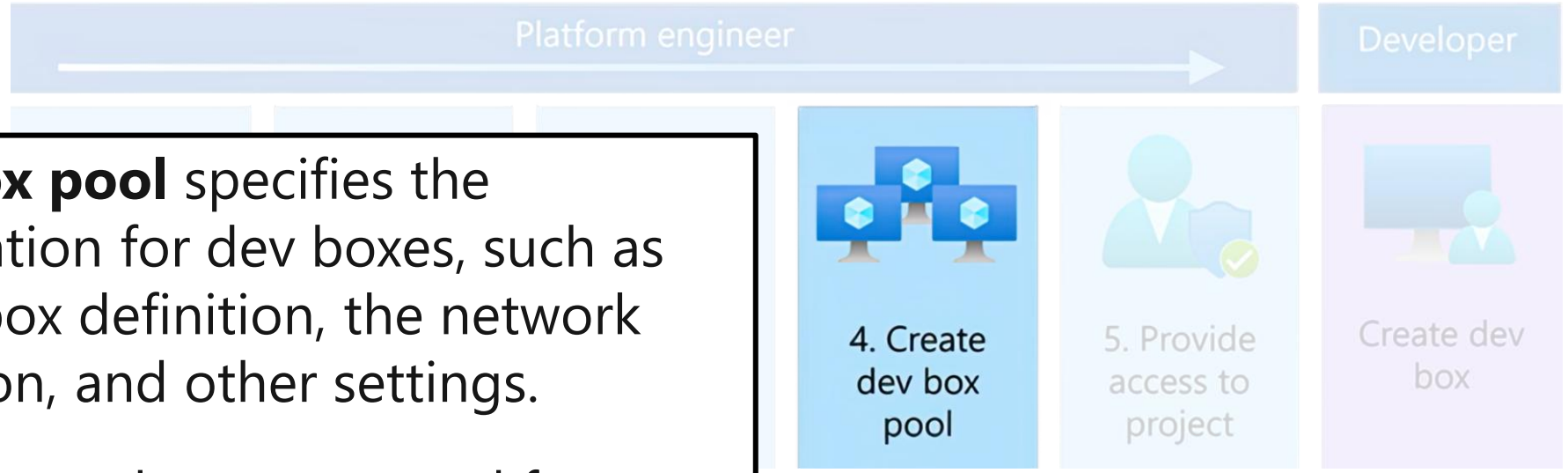
Configure Microsoft DevBox



A **dev box definition** specifies the configuration of the dev boxes, such as the virtual machine image and compute resources for the dev box.

You can either choose a VM image from the Azure Marketplace or use an Azure compute gallery to use custom VM images.

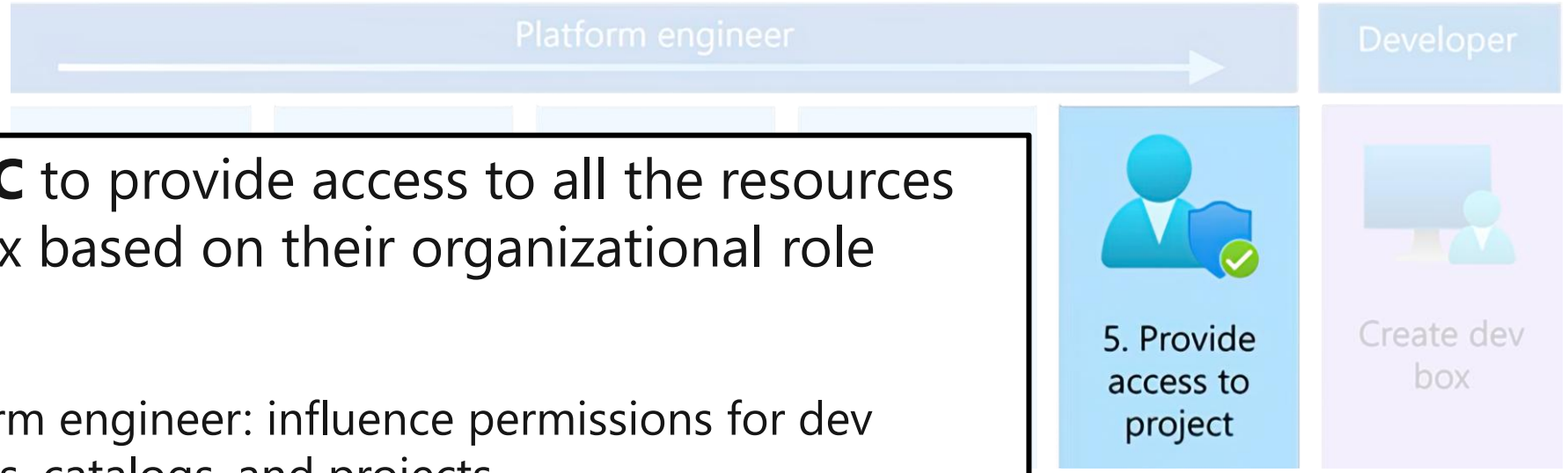
Configure Microsoft DevBox



A **dev box pool** specifies the configuration for dev boxes, such as the dev box definition, the network connection, and other settings.

All dev boxes that are created from a **dev box pool** share the same configuration.

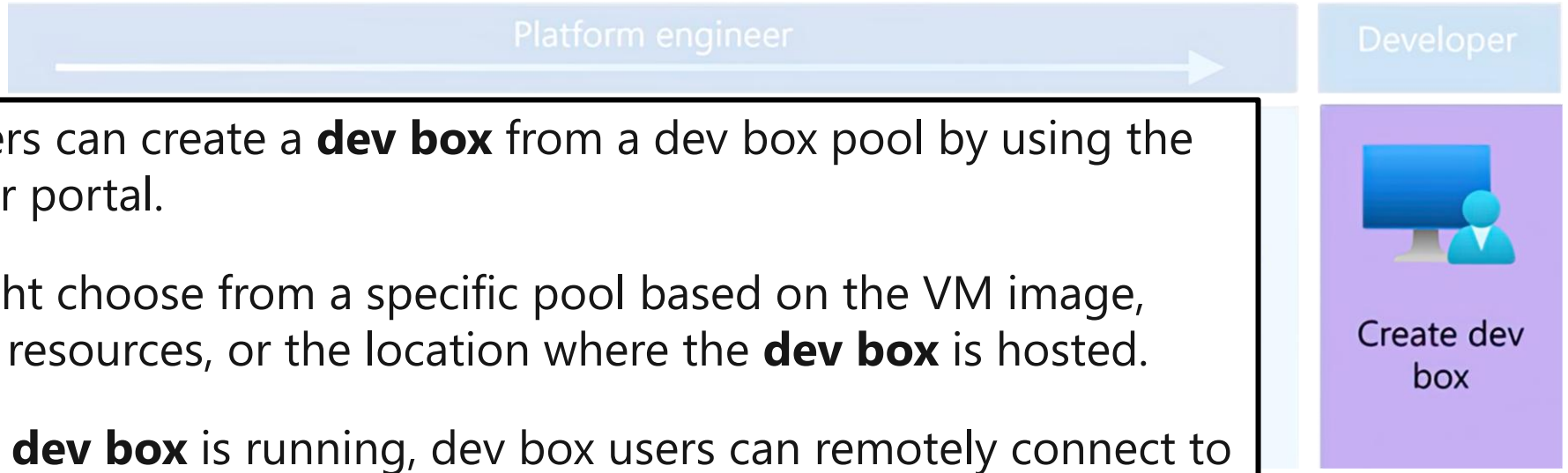
Configure Microsoft DevBox



Use **RBAC** to provide access to all the resources of DevBox based on their organizational role types:

- Platform engineer: influence permissions for dev centers, catalogs, and projects
- Dev manager: influence permissions for project-based resources
- Developer roles: influence permissions for users

Configure Microsoft DevBox



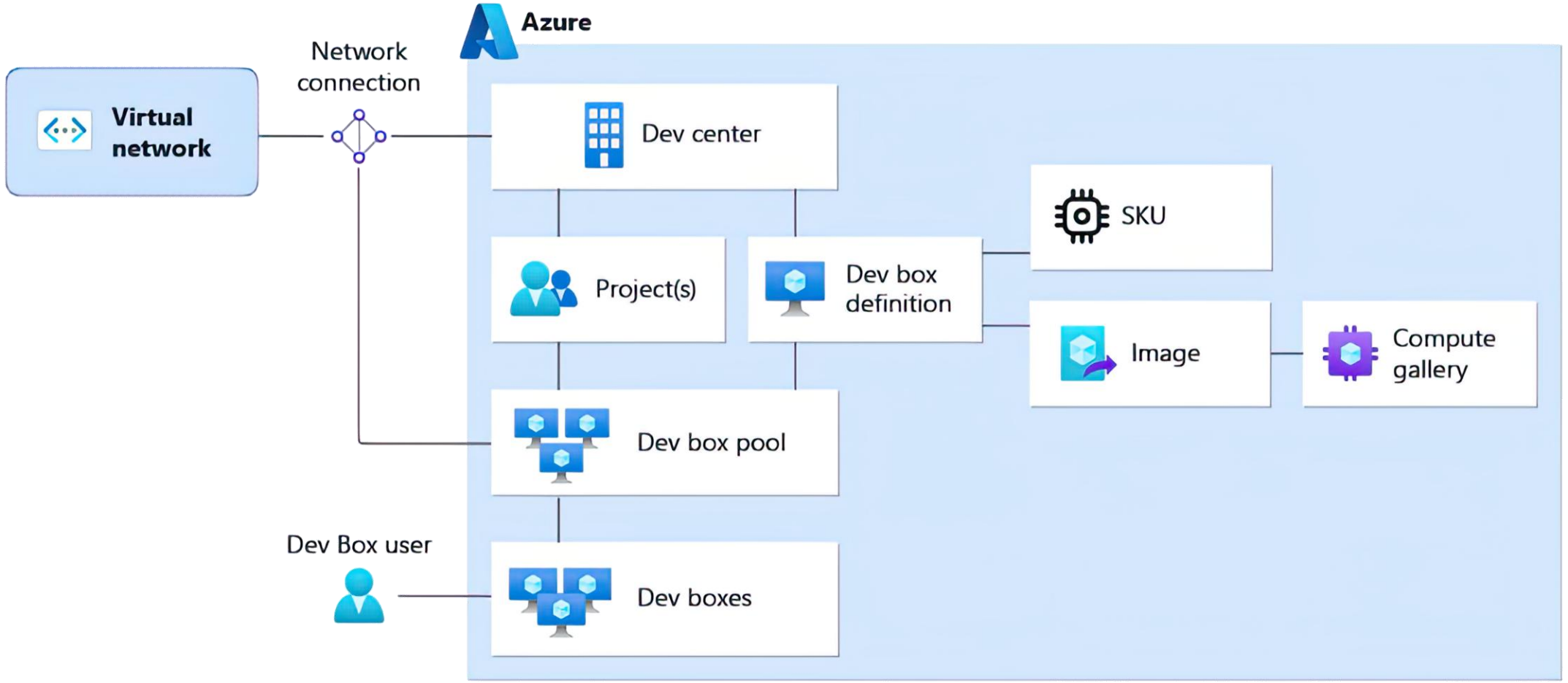
Developers can create a **dev box** from a dev box pool by using the developer portal.

They might choose from a specific pool based on the VM image, compute resources, or the location where the **dev box** is hosted.

Once the **dev box** is running, dev box users can remotely connect to it from the developer portal.

Dev box users have full control over the dev boxes they create and can manage them from the developer portal.

Microsoft DevBox Architecture



Demo

Microsoft DevBox

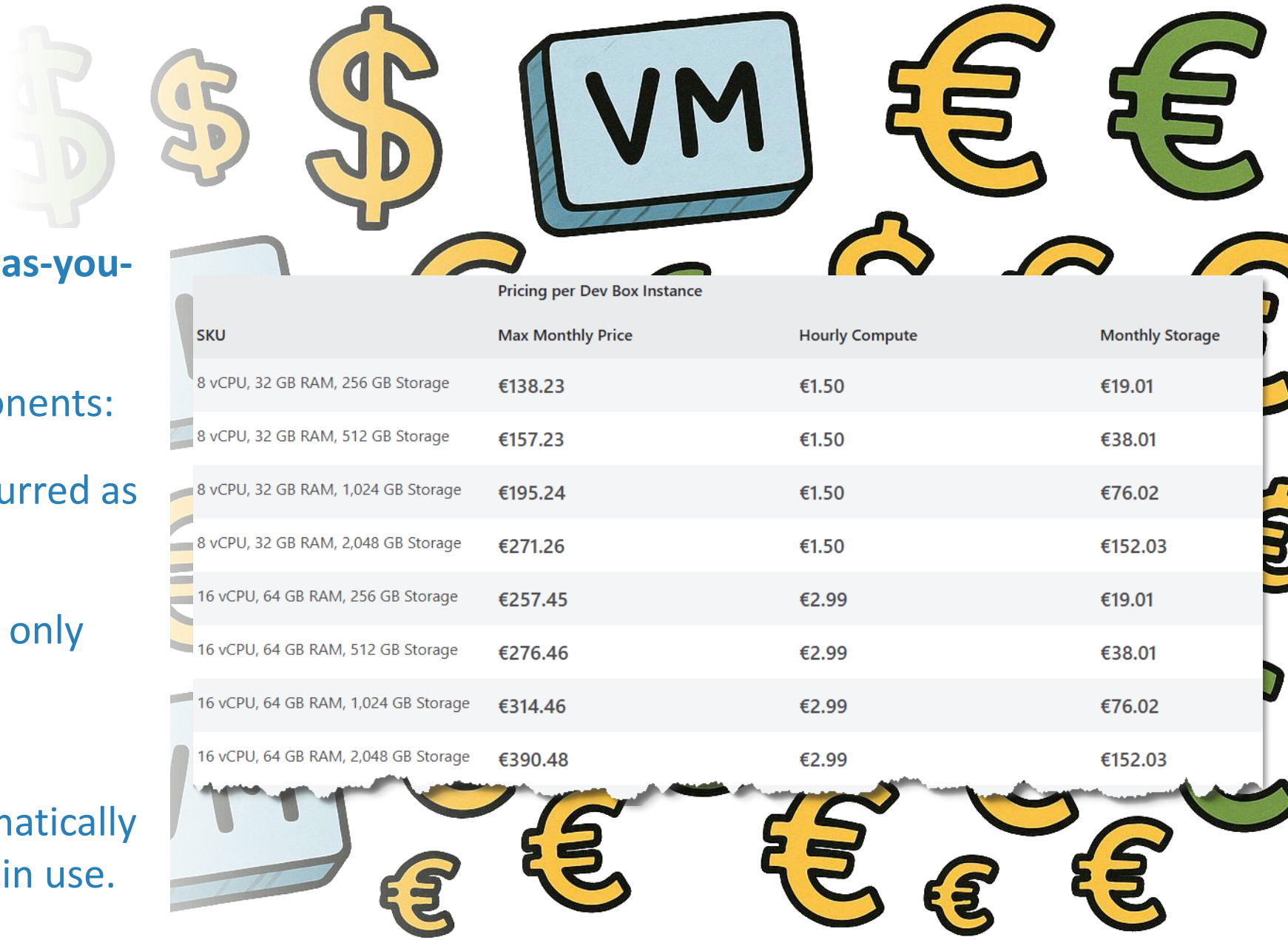
Pricing

Microsoft Dev Box uses a **pay-as-you-go pricing model**.

Costs are split into two components:

- **storage costs**, which are incurred as long as the Dev Box exists
- **compute costs**, which apply only when the Dev Box is in use (running).

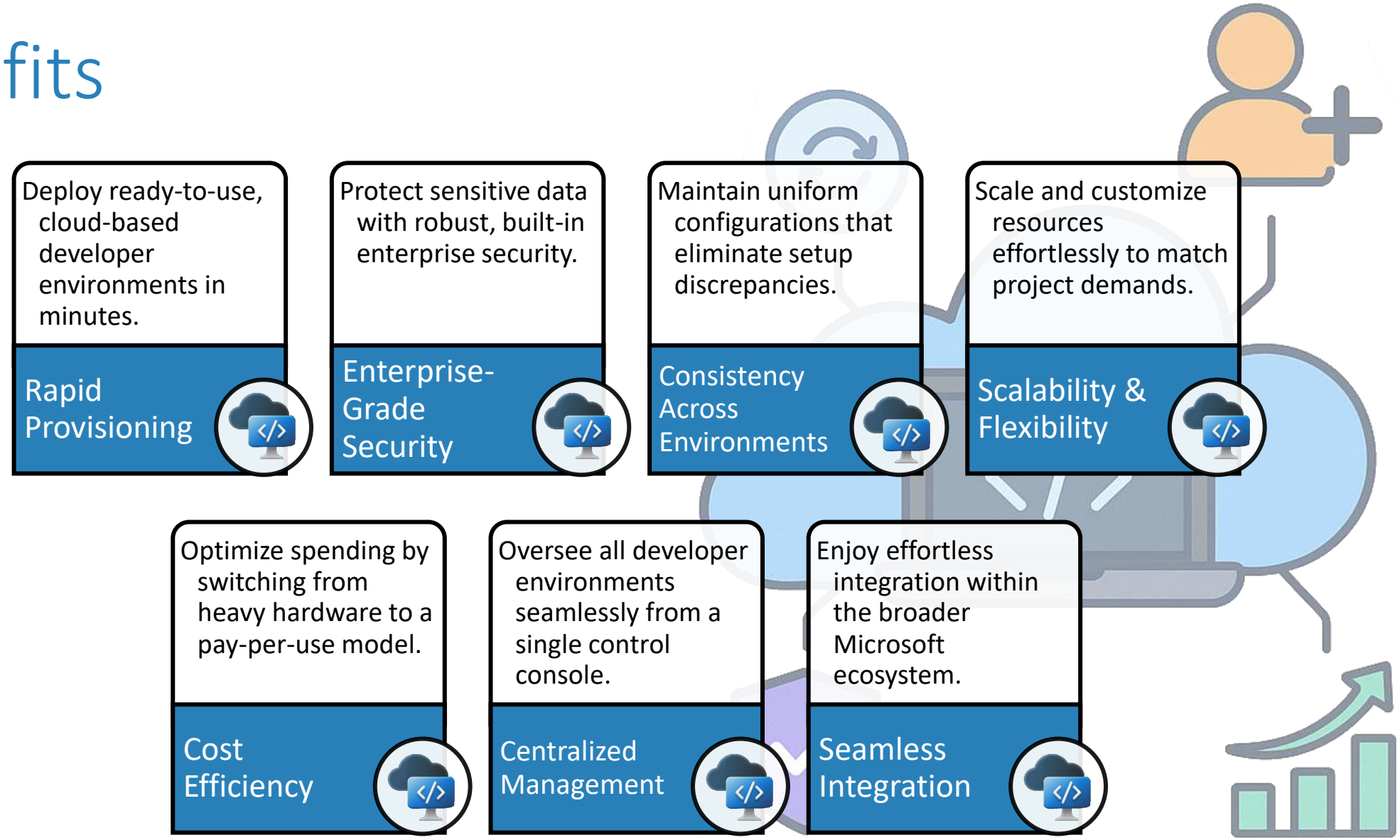
You can reduce costs by automatically stopping Dev Boxes when not in use.



Pricing per Dev Box Instance

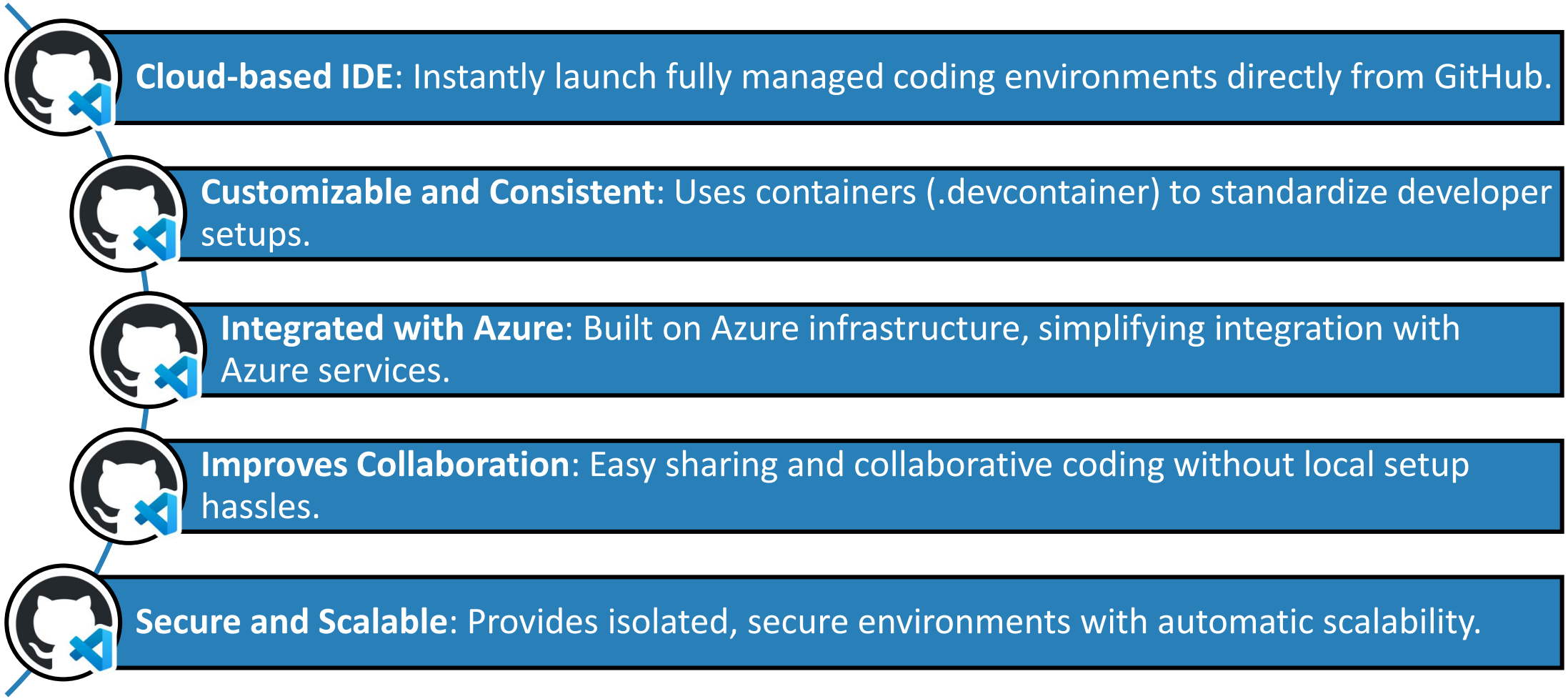
SKU	Max Monthly Price	Hourly Compute	Monthly Storage
8 vCPU, 32 GB RAM, 256 GB Storage	€138.23	€1.50	€19.01
8 vCPU, 32 GB RAM, 512 GB Storage	€157.23	€1.50	€38.01
8 vCPU, 32 GB RAM, 1,024 GB Storage	€195.24	€1.50	€76.02
8 vCPU, 32 GB RAM, 2,048 GB Storage	€271.26	€1.50	€152.03
16 vCPU, 64 GB RAM, 256 GB Storage	€257.45	€2.99	€19.01
16 vCPU, 64 GB RAM, 512 GB Storage	€276.46	€2.99	€38.01
16 vCPU, 64 GB RAM, 1,024 GB Storage	€314.46	€2.99	€76.02
16 vCPU, 64 GB RAM, 2,048 GB Storage	€390.48	€2.99	€152.03

Benefits



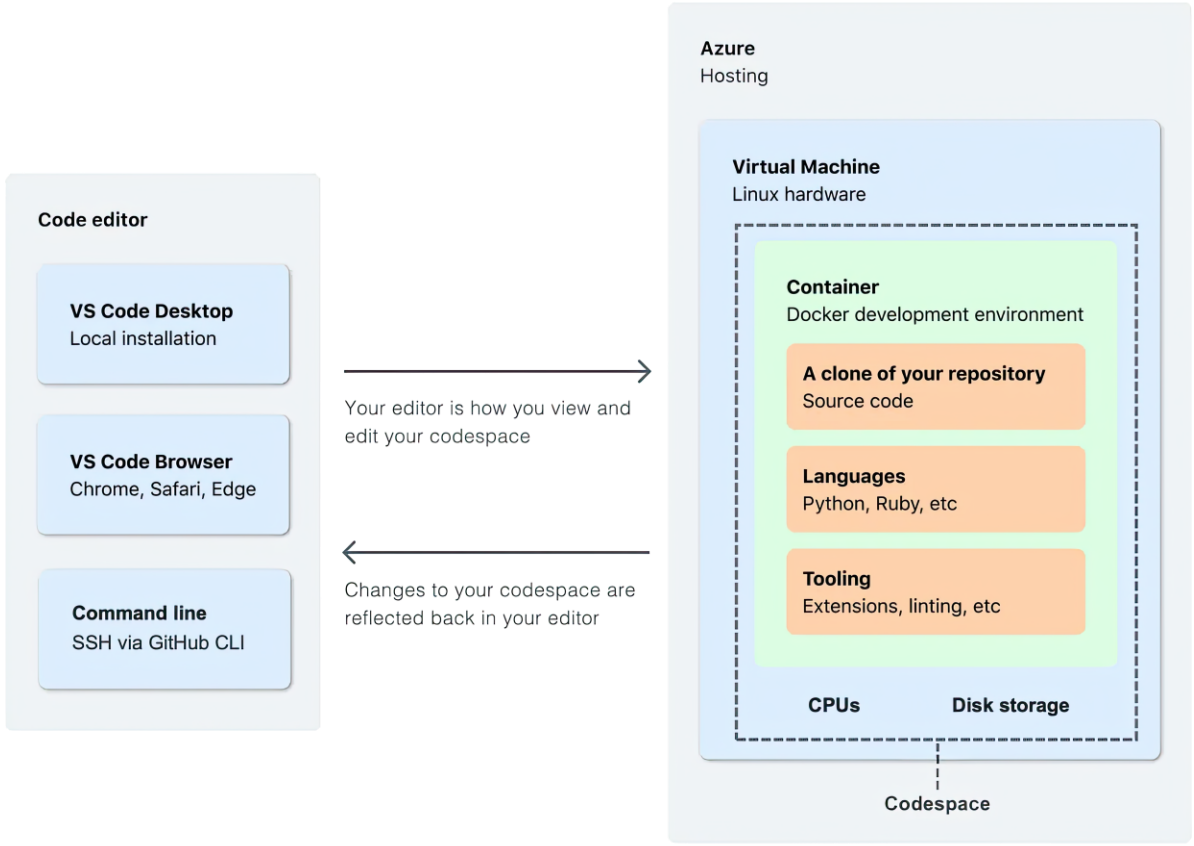
GitHub Codespaces

What are GitHub Codespaces?



How they work

- Each Codespace you create is hosted by GitHub in a **Docker container**, running on a **virtual machine**.
- You can choose from a selection of virtual machine types.
- By default, the Codespace development environment is created from an **Ubuntu Linux** but you can use an image based on a Linux distribution of your choice.
- Windows and macOS are not supported operating systems



Where you can use them

From a GitHub template or any template repository on GitHub to start a new project

From a branch in your repository for new feature work

From an open pull request to explore work-in-progress

From a commit in a repository's history to investigate a bug at a specific point in time

The Codespace creation process

VM and storage are assigned to your Codespace

A dedicates VM launches.

Full access to computing resources and root access.

Repository cloned into VM's /workspaces directory and mounted in the dev container.

Dev container is created

Codespaces uses Docker containers configured via devcontainer.json.

GitHub uses a default image if no configuration is provided.

Default image details are in the devcontainers/images repository

Connecting to the Codespace

You can connect to it by using:

- Your web browser
- Visual Studio Code
- GitHub CLI

Post-creation setup

After connecting, your codespace runs automated setup commands defined in devcontainer.json, like postCreateCommand and postAttachCommand.

Demo

GitHub Copilot

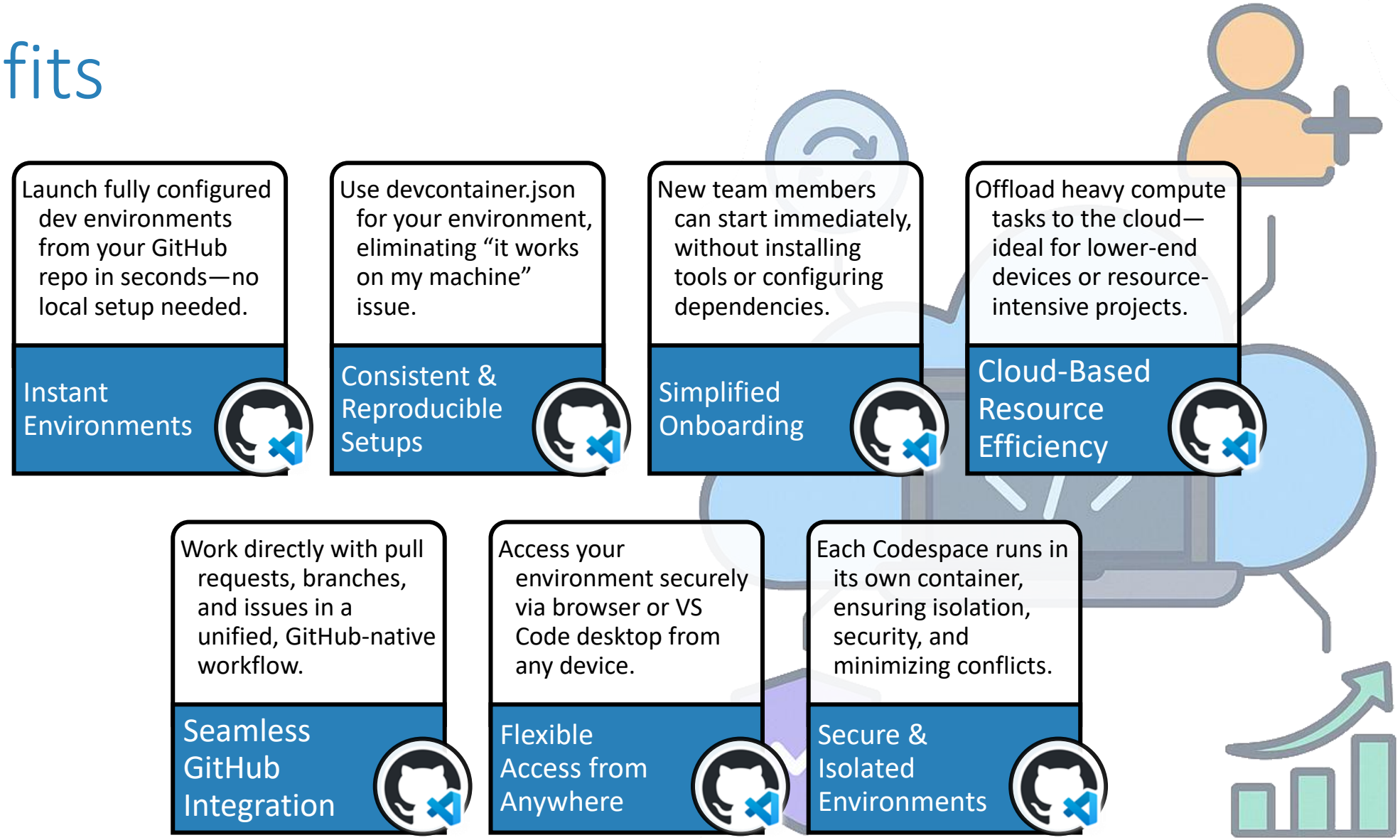
Pricing

- **GitHub Codespaces** utilizes a **usage-based** pricing system, charging for **compute time** starting at $0.18 per hour for a 2-core machine and $0.07 per GB of **storage** monthly.
- **Personal accounts** have monthly usage limits—15 GB storage and 120 core hours for Free, and 20 GB storage and 180 core hours for Pro.
- **Organizations** need a non-zero spending limit to use Codespaces and can manage costs by selecting machine types and usage policies.

Machine type	Unit of measure	Included usage multiplier	Price
2 core	1 hour	2	$0.18
4 core	1 hour	4	$0.36
8 core	1 hour	8	$0.72
16 core	1 hour	16	$1.44
32 core	1 hour	32	$2.88
Storage	1 GB-month	Not applicable	$0.07

Account plan	Storage per month	Core hours per month
GitHub Free for personal accounts	15 GB-month	120
GitHub Pro	20 GB-month	180

Benefits

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Who win?


community


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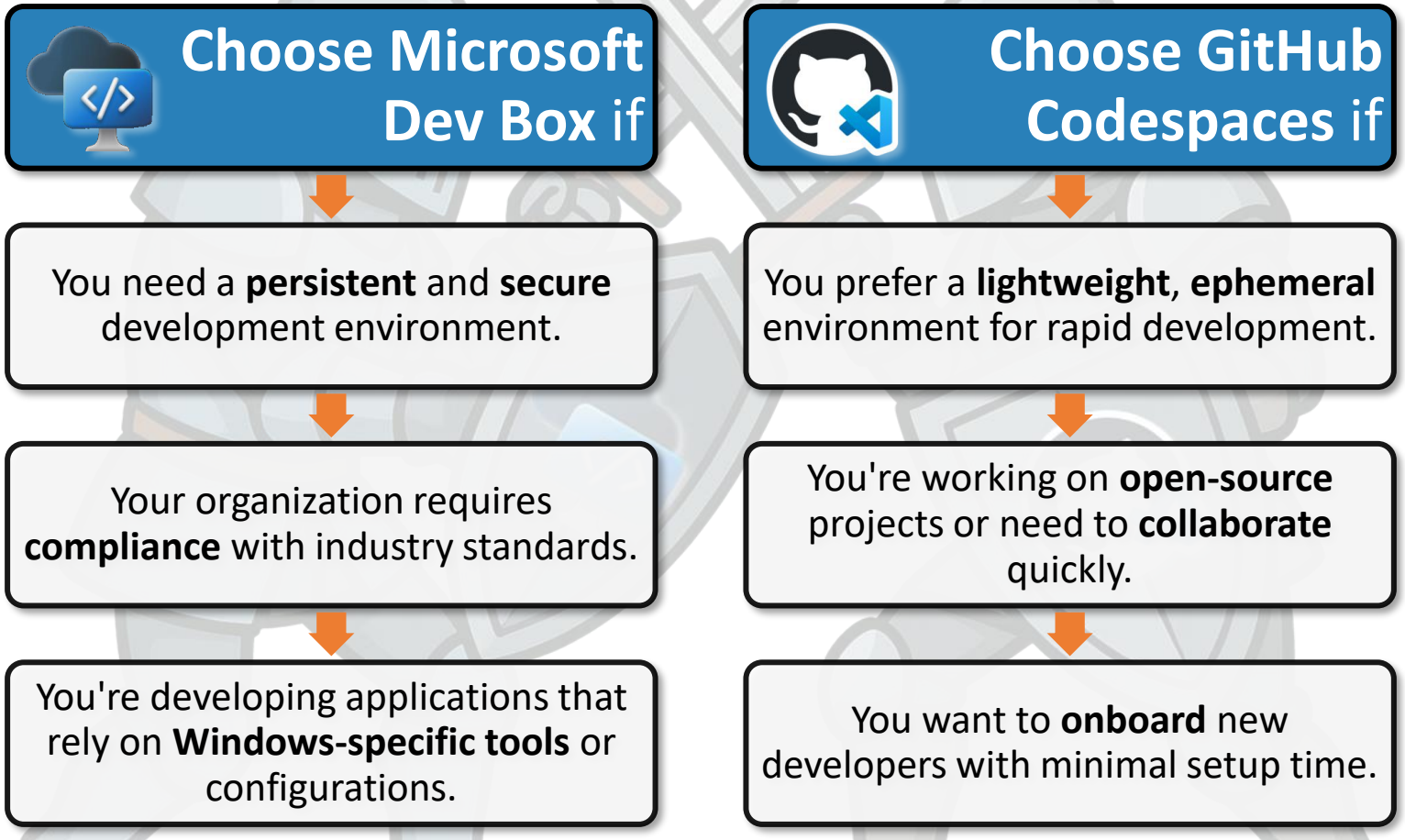
DevBox vs Codespaces…who win?



DevBox vs Codespaces...who wins?

Not every battle ends with a winner!
Sometimes, it's about choosing the right weapon for the right war.

Any Questions?

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