Building an IDP using vCluster + DevSpace:

An GitOps use case

Lucas Albuquerque | 06-09-2022

Agenda

- A bit of context
- The Audience
- The Challenge
- Local Coding, Remote Execution
- Inner Development Loops
- Remote Runners
- Demo Time
- Worth Also Considering

50 min

The Audicence

Data Scientists

- Spread in different offices or WFH
- Limited SW Dev background
- Work in ML models for Industrial Data
- Just looking for a places to run their models

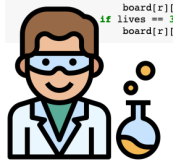
Data Engineers

- Support one or more DS Teams
- Data Platforms background
- Expected to support DS on Platform needs
- Not following common practices

The Challenge…

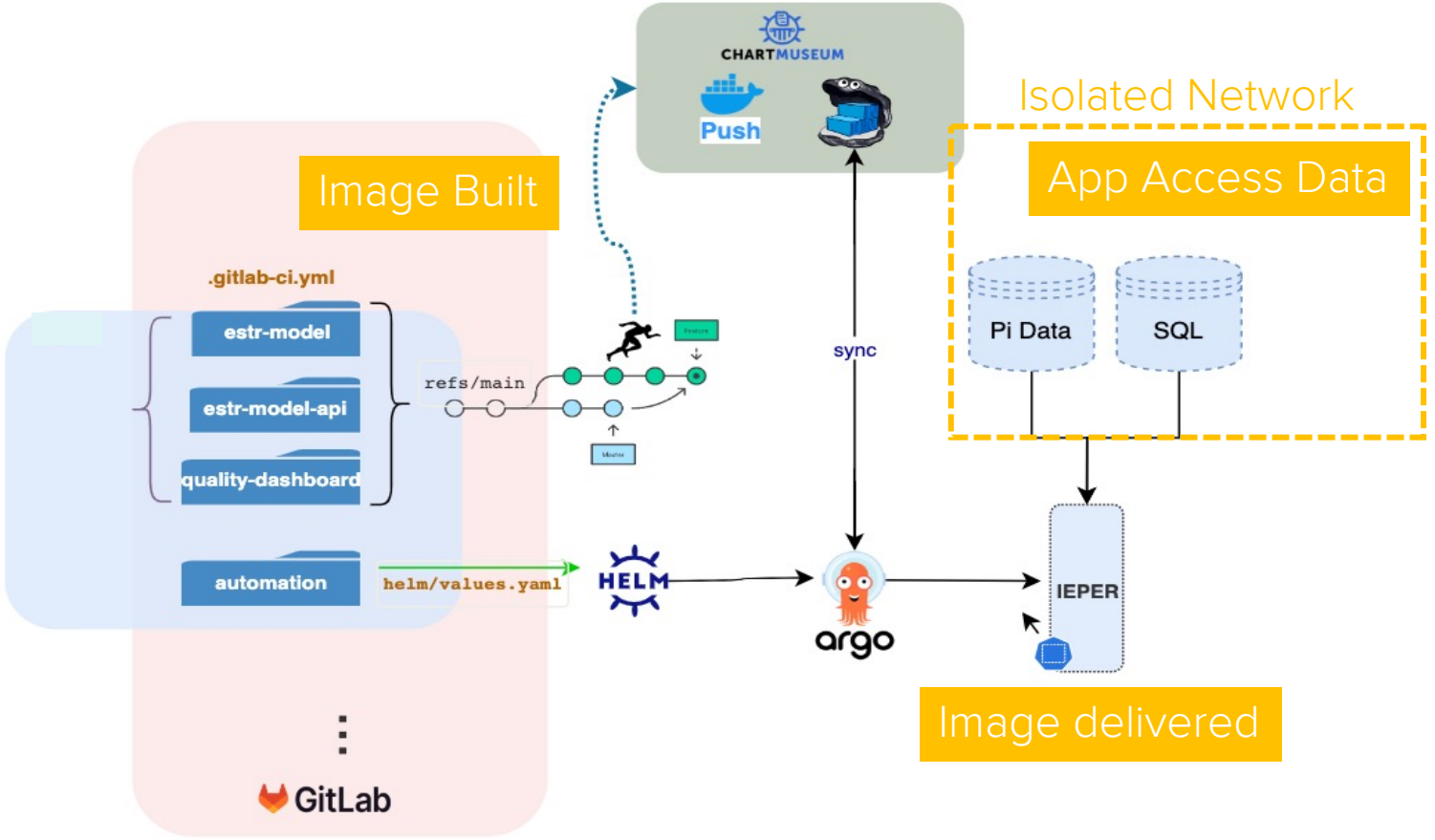
```
class Solution:
    def gameOfLife(self, board):
        """
        :type board: List[List[int]]
        :rtype: void Do not return anything, modify board in-place instead.
        """
        self.w, self.h = len(board[0]), len(board)
        mat = [[0]*self.w for _ in range(self.h)]
        for r in range(self.h):
            for c in range(self.w):
                mat[r][c] = board[r][c]

        for r in range(self.h):
            for c in range(self.w):
                lives = self._neighborsLives(mat, (r, c))
                if lives < 2:
                    board[r][c] = 0
                if lives > 3:
                    board[r][c] = 0
                if lives == 3 and not board[r][c]:
                    board[r][c] = 1
```

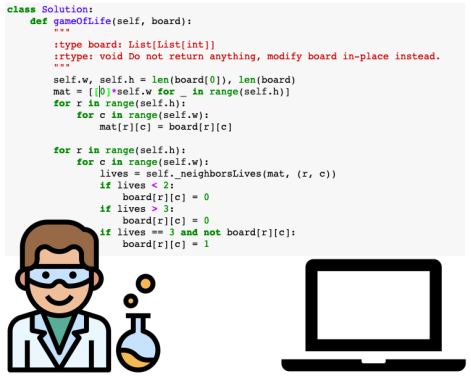


Data Scientist

Push the code

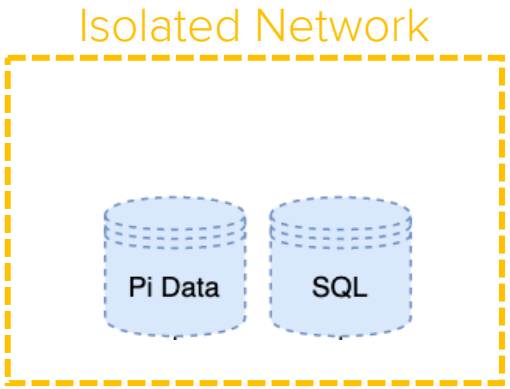


The Challenge…



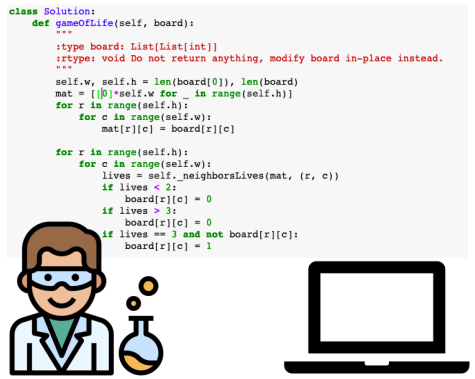
Data Scientist

App Access Data



- Validate ML before pushing
- Accelerate the delivery process
- Nurture experiementation

Local Coding, Remote Running…



Data Scientist

Code local

Code Sync

Remote Runner

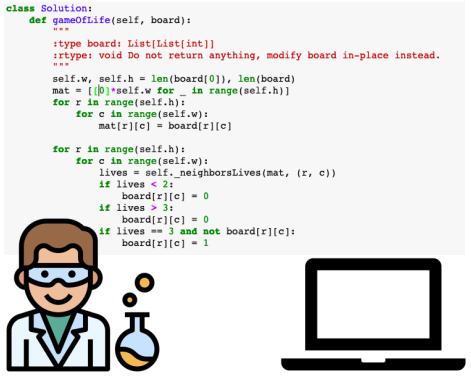
App Access Data

Isolated Network

Pi Data

SQL

Inner Development Loop…



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Code local

Code Sync

- Sync code from local to remote
- No image rebuild process on change
- Support for Helm and Kustomize
- Declared in code
- Platform agnostic… Cloud or On-Prem
- Run remotely
- Sync, Build and Deploy workflow

DevSpace

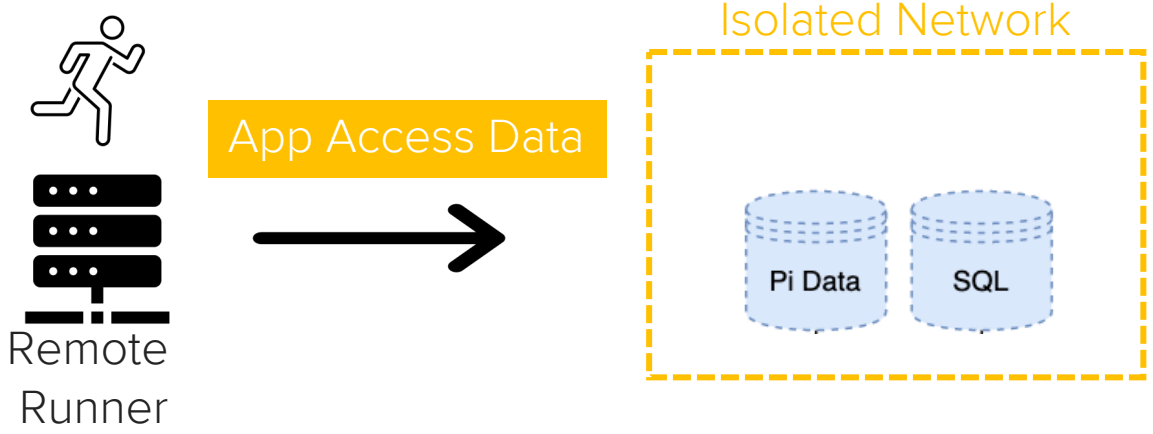
okteto

TILT

garden

SKAFFOLD

Remote Runner



- Lightweight
- Declared in code
- Recyclable
- Isolated environments
- Autonomy for devs
- Resources allocation
- Support for Helm charts

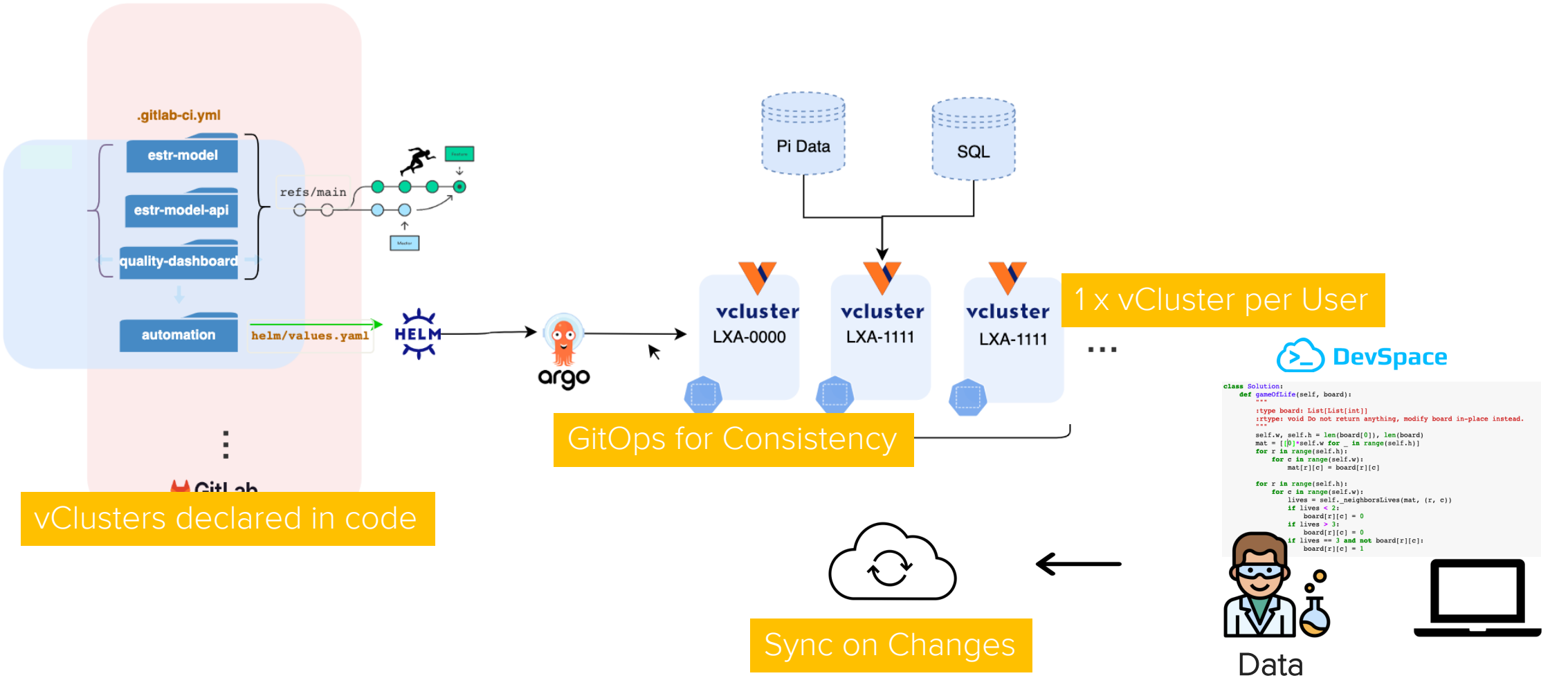
vcluster

K3S

kiosk

capsule

Here comes the solution…



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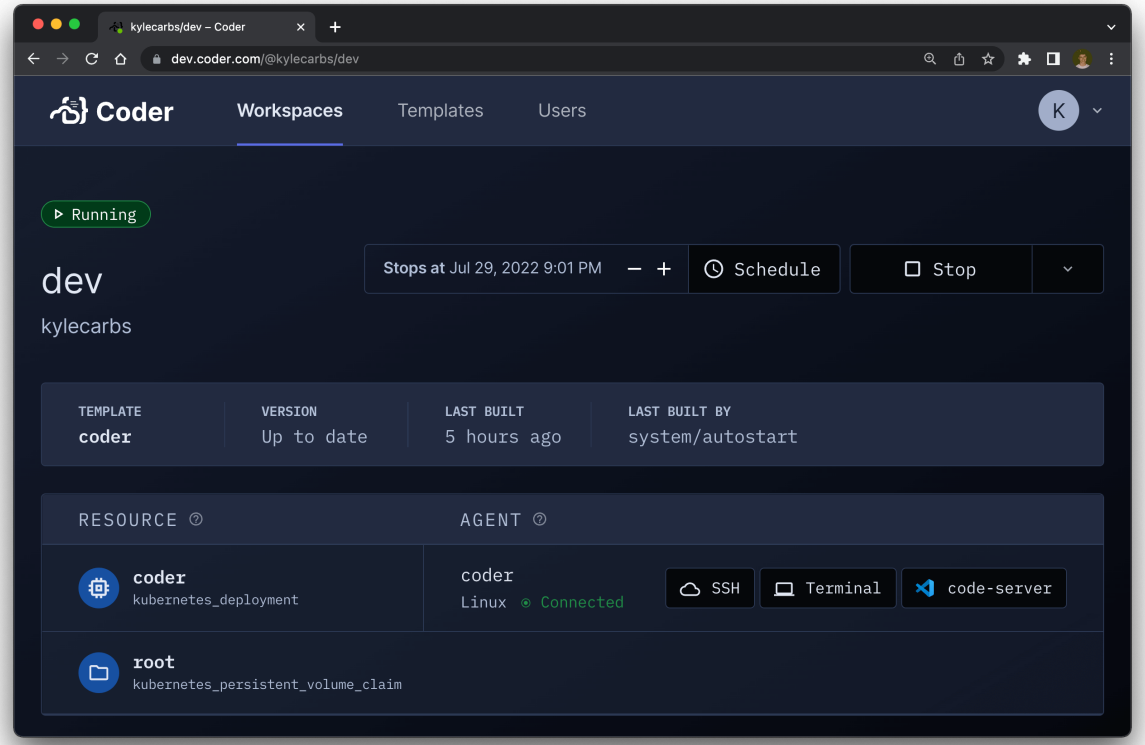
Demo Time

... Let's see in action.

To Check out as well…

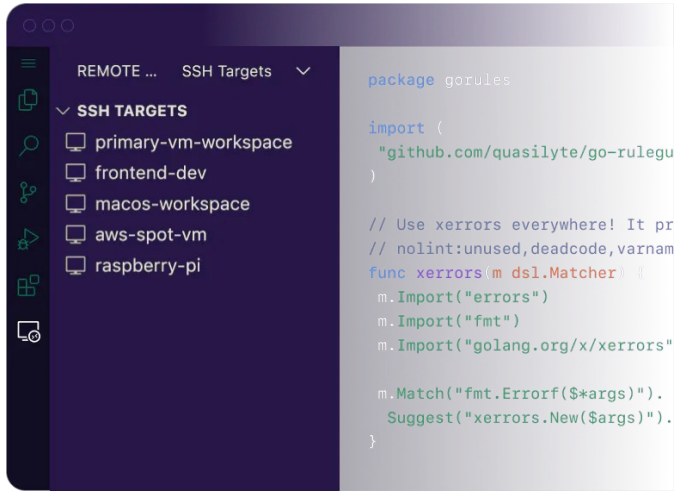
Coder creates remote development machines so your team can develop from anywhere.
https://coder.com/




```
> Create a workspace
~ coder create my-dev

Specify a size for your workspace:

  > 4 cores, 16GB RAM
    8 cores, 32GB RAM
    32 cores, 128GB RAM
    64 cores, 256GB RAM
```



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Thanks for Joining
Questions?

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