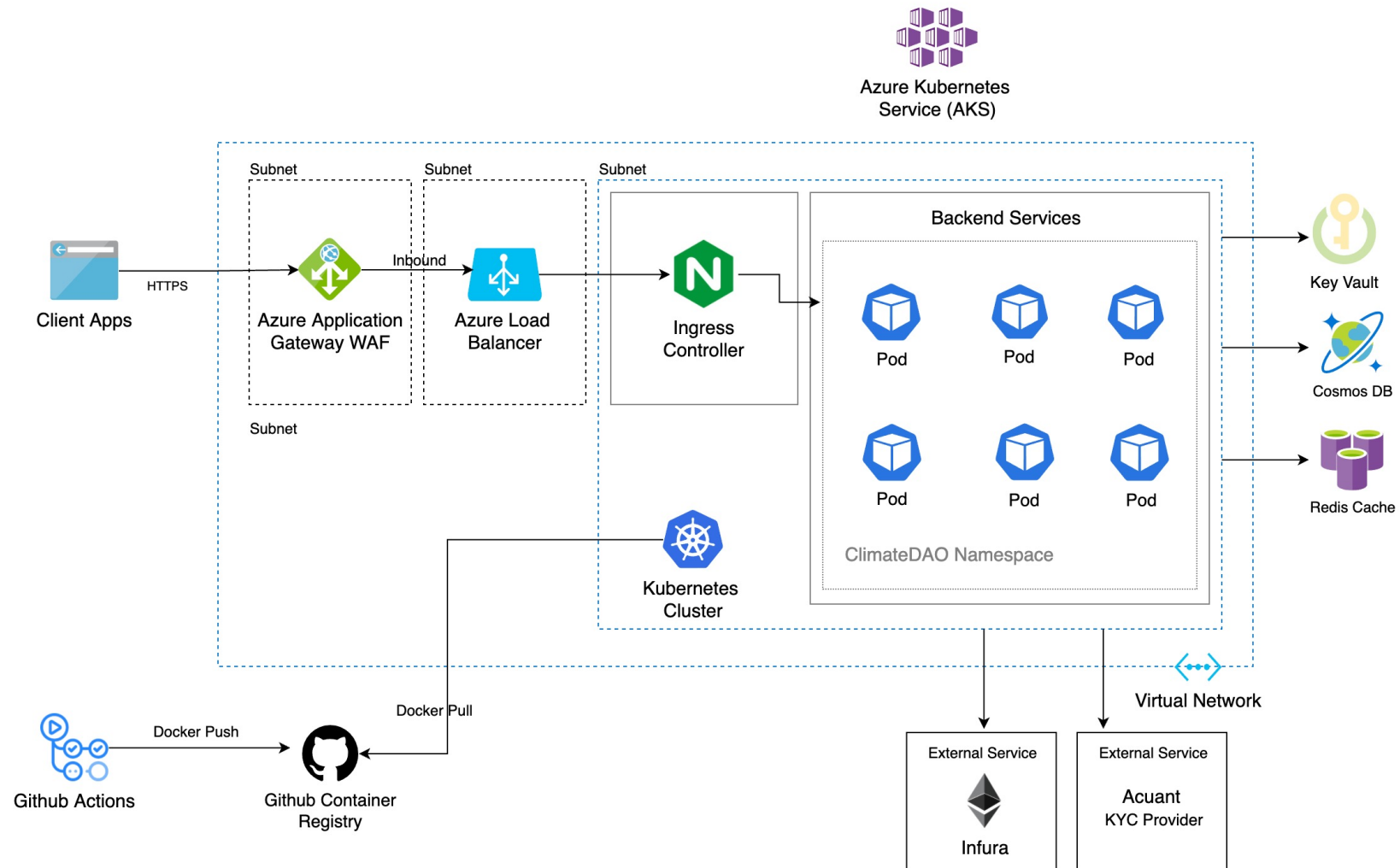
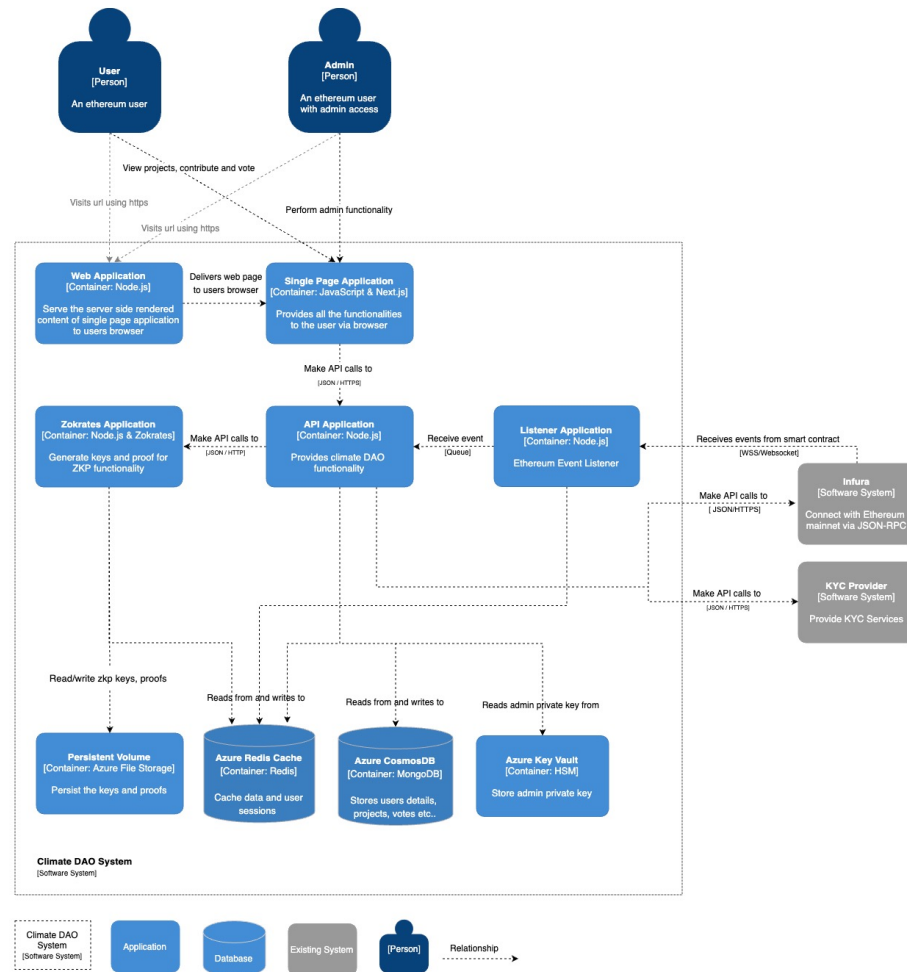


Climate DAO Architecture

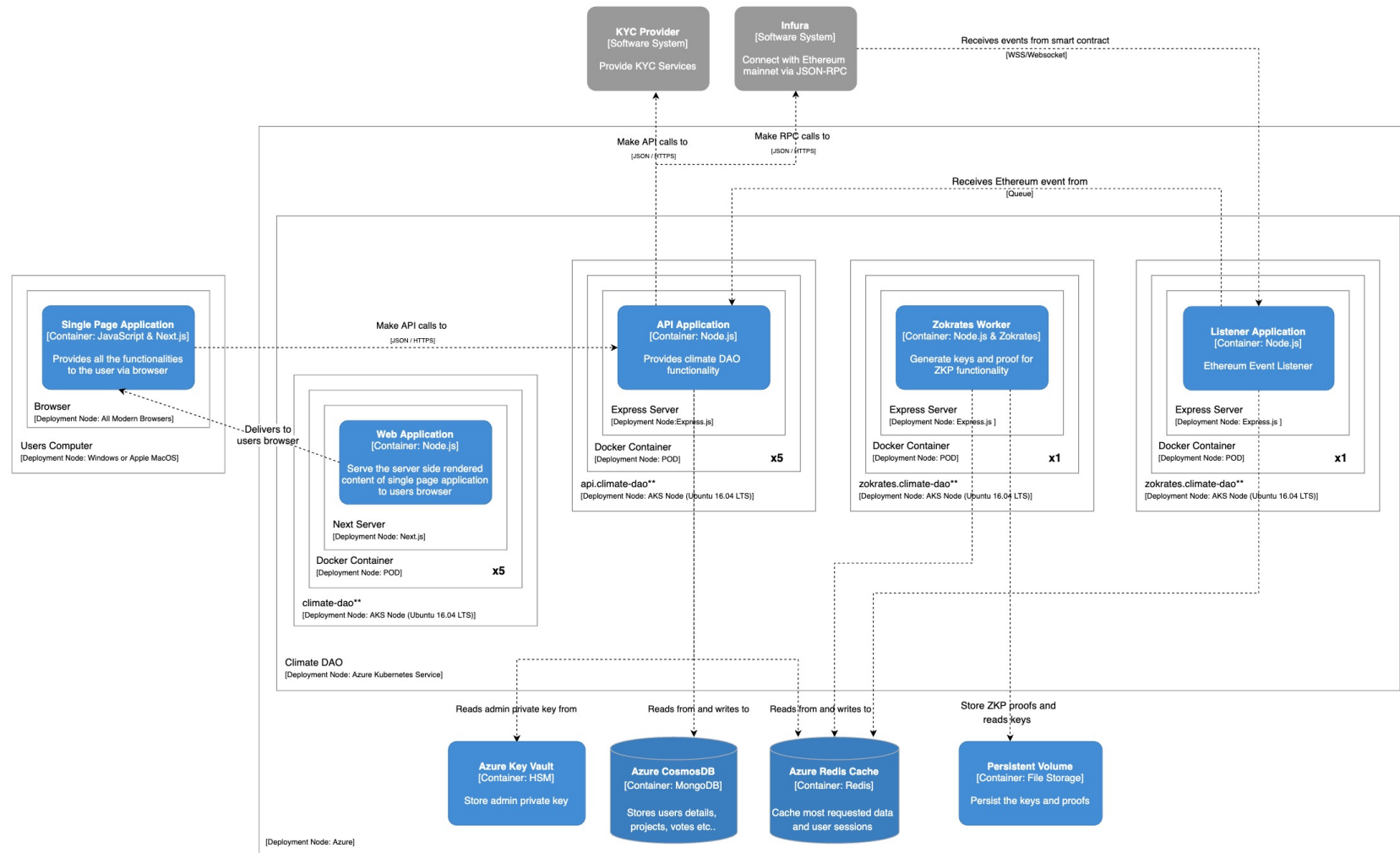
Infrastructure Architecture



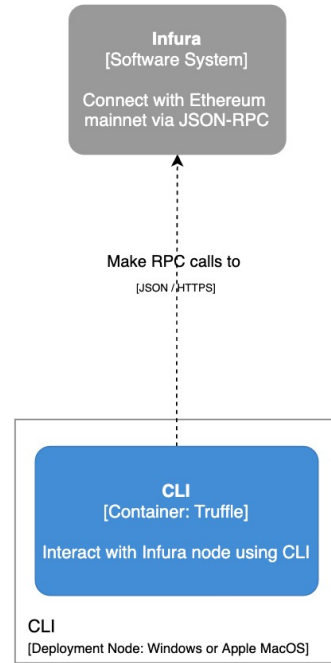
Container(Applications & DB) Diagram



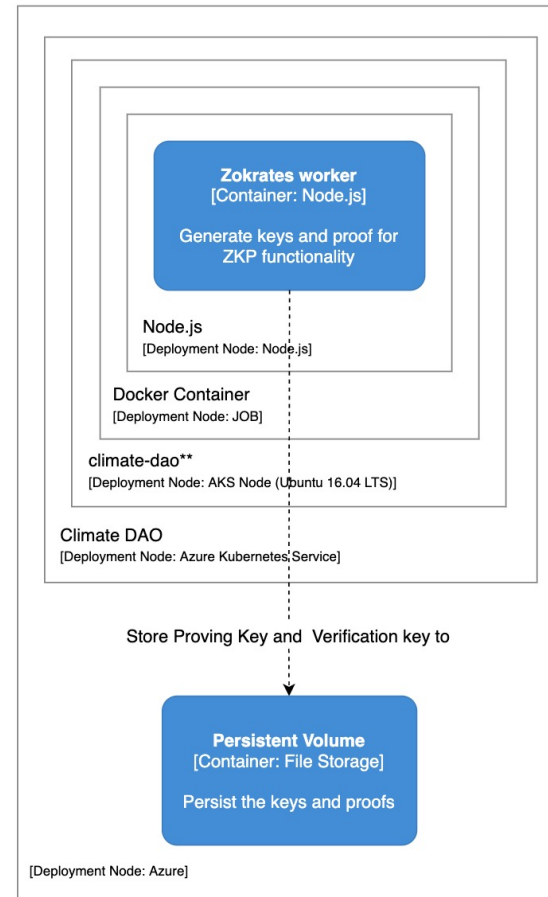
Deployment Diagram



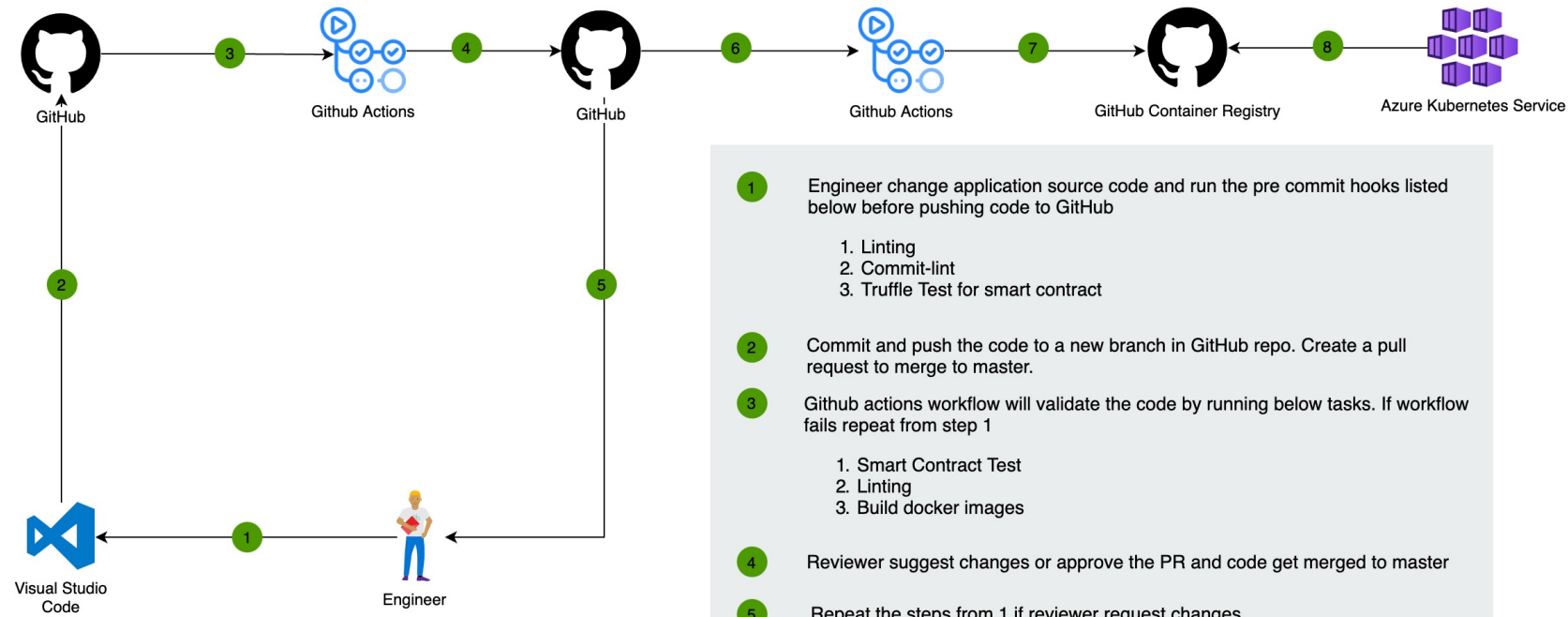
Contract Deployment & ZKP Key Generation



- Deploy the zokrates worker to kubernetes. It will run the circuit set up and persists the ZKP Proving Key and Verification Key in the persistent volume.
- Copy the verification key generated after circuit set up and pass it as an argument to contract constructor.
- Run truffle migrate to deploy the contract.



CICD



- 1 Engineer change application source code and run the pre commit hooks listed below before pushing code to GitHub
 1. Linting
 2. Commit-lint
 3. Truffle Test for smart contract
- 2 Commit and push the code to a new branch in GitHub repo. Create a pull request to merge to master.
- 3 Github actions workflow will validate the code by running below tasks. If workflow fails repeat from step 1
 1. Smart Contract Test
 2. Linting
 3. Build docker images
- 4 Reviewer suggest changes or approve the PR and code get merged to master
- 5 Repeat the steps from 1 if reviewer request changes
- 6 Github actions workflow will be triggered once code has been merged to master and run below tasks
 1. Smart Contract Test
 2. Linting
 3. Build docker images
 4. Push images to GitHub container registry
- 7 Github action workflow will push docker images to registry
- 8 Manual deployment to AKS. AKS will pull images from container registry