

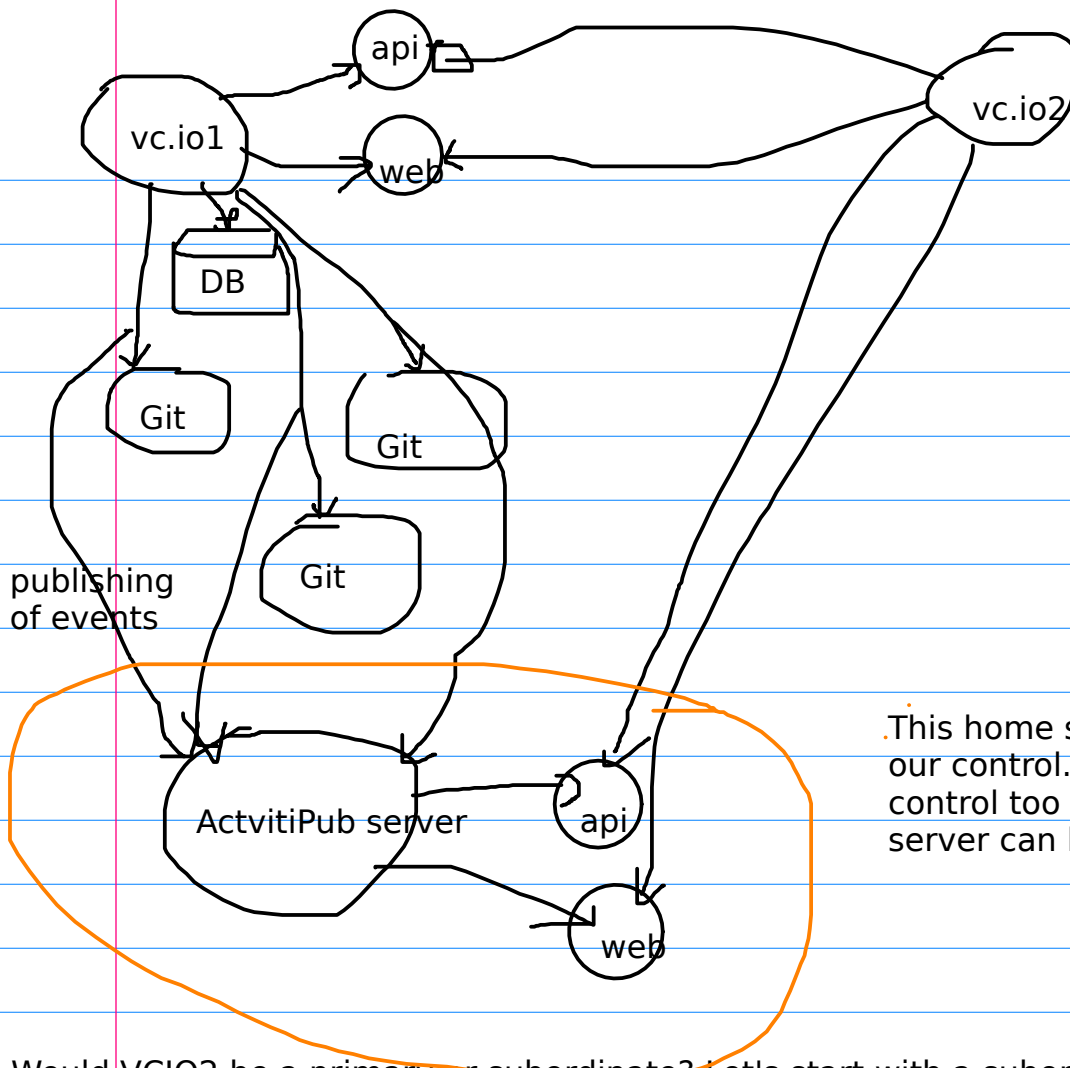
publishing
of events

As a user I follow a package in ActvitiPub server and I receive notifications when there is a new event such as a vulnerability or fixed version for a given PURL. How am I notified? Using whatever notification mechanism exists in the ActvitiPub server.

As a user I find a vulnerability in VCIO that has incorrect data such as a wrong package version for the fixed package. At first I will initiate a discussion on the ActvitiPub server for the message/post about this vulnerability stating that this is incorrect. We have a discussion with multiple users on this and eventually agree on the outcome. When we reached some consensus, someone either does an update in the backing VCIO (with some UI TBD) or makes a PR in the backing git repo with the proposed data updates. This assume we have some schema defined to store the data likely as YAML in the git repos either keyed by PURL or by VCID (or both). Once approved, the data either merged or pushed and we have an updated VCIO and an updated backing Git repo AND there is a new event posted to the PURL and VCID account in ActvitiPub server.

Notes: here every PURL (no version) and every VCID would have its own Fediverse account. For instance @pkg:maven/org.apache.logging posts that v1.2.3 is vulnerable to @VCID-123

Question: where is the state and the big picture? The combo of a VCIO and its backing Git repos are consistent as any time



This home server or server(s) are under our control.... accounts are under our control too and can easily be created. The server can be federated elsewhere.

Would VCIO2 be a primary or subordinate? Let's start with a subordinate VCIO2.

The org SaveTheCode.org has its own installation of VCIO, BUT they do not run importers nor improvers, they are merely mirroring the data from VCIO.

Two ways to mirror:

1. mirror everything by continuously polling all the Git repos, fetch and run some minimal import job that updates the local VCIO. How to know which Git repo and ActivityPub to follow? It is by VCIO1 as an API endpoint or there is well-known place where to get this such as an ActivityPub account that advertizes where to find this data.

2. selective mirror, where I am only looking for things that affect a set list of PURLs. I need to find a way to discover the activitypub accounts for each PURL. These may be just based on the PURL so there is no need for a directory or index in this case. On each account I will find the history of conversations and events in the PURL activity stream... and also its metadata backing repository (which BTW is also a PURL)

NOTE: in this mode there is no MULTIPLE PRIMARY VCIOs servers. If there is another primary VCIO, it would NOT be able to interoperate in this context and MUST have a different VCID prefix so that they do not conflict.

Here VCIO2 is:

1. a VCIO instance that does not importers and improvers, only a special synchronizer
2. An ActivityPub user account that will follow all the PURL it is interested in and received events stream. Based on this event stream it will fetch data from the back Git repos and update itself accordingly

