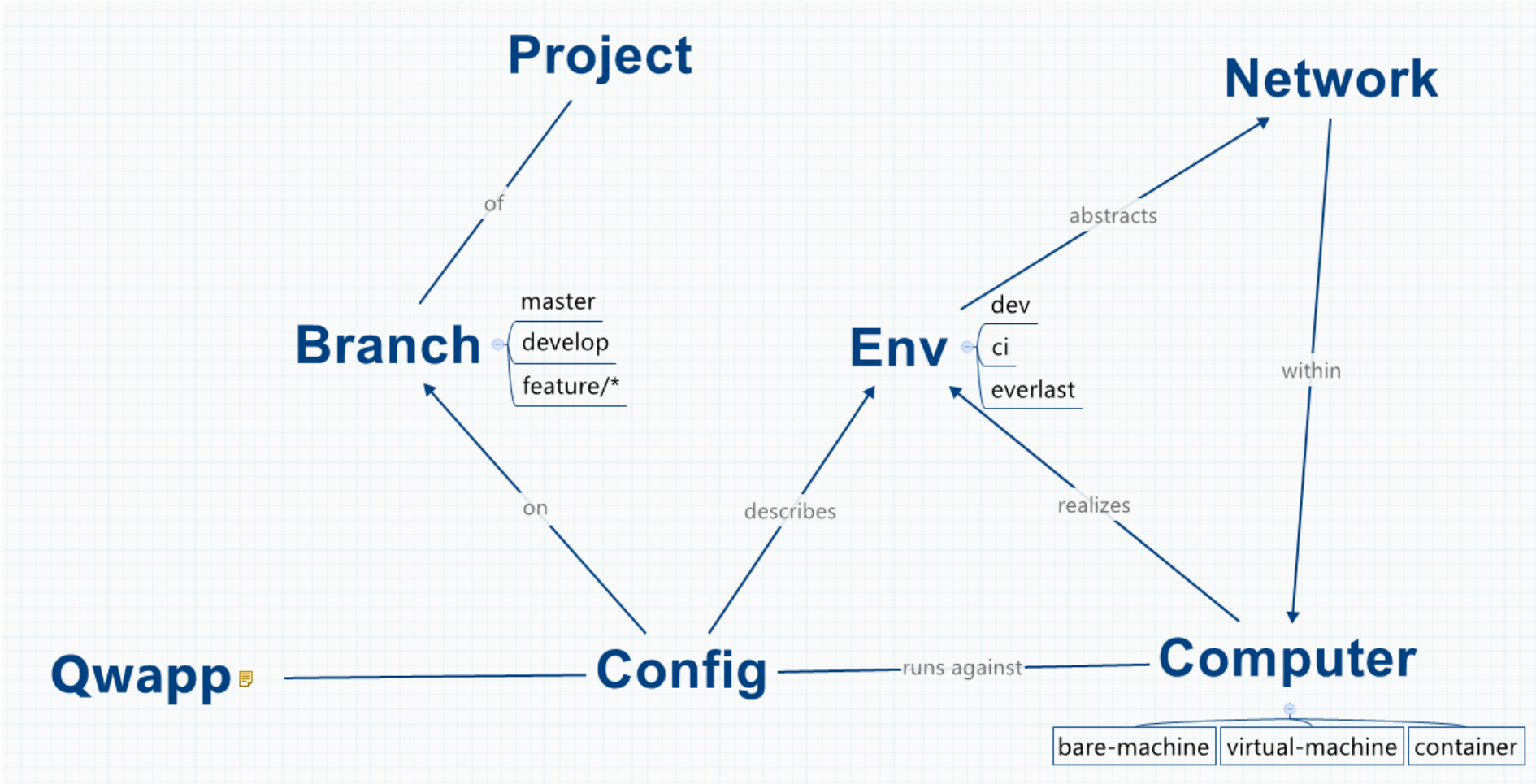
Qwapp

An Integration Tool for QWant APPlications

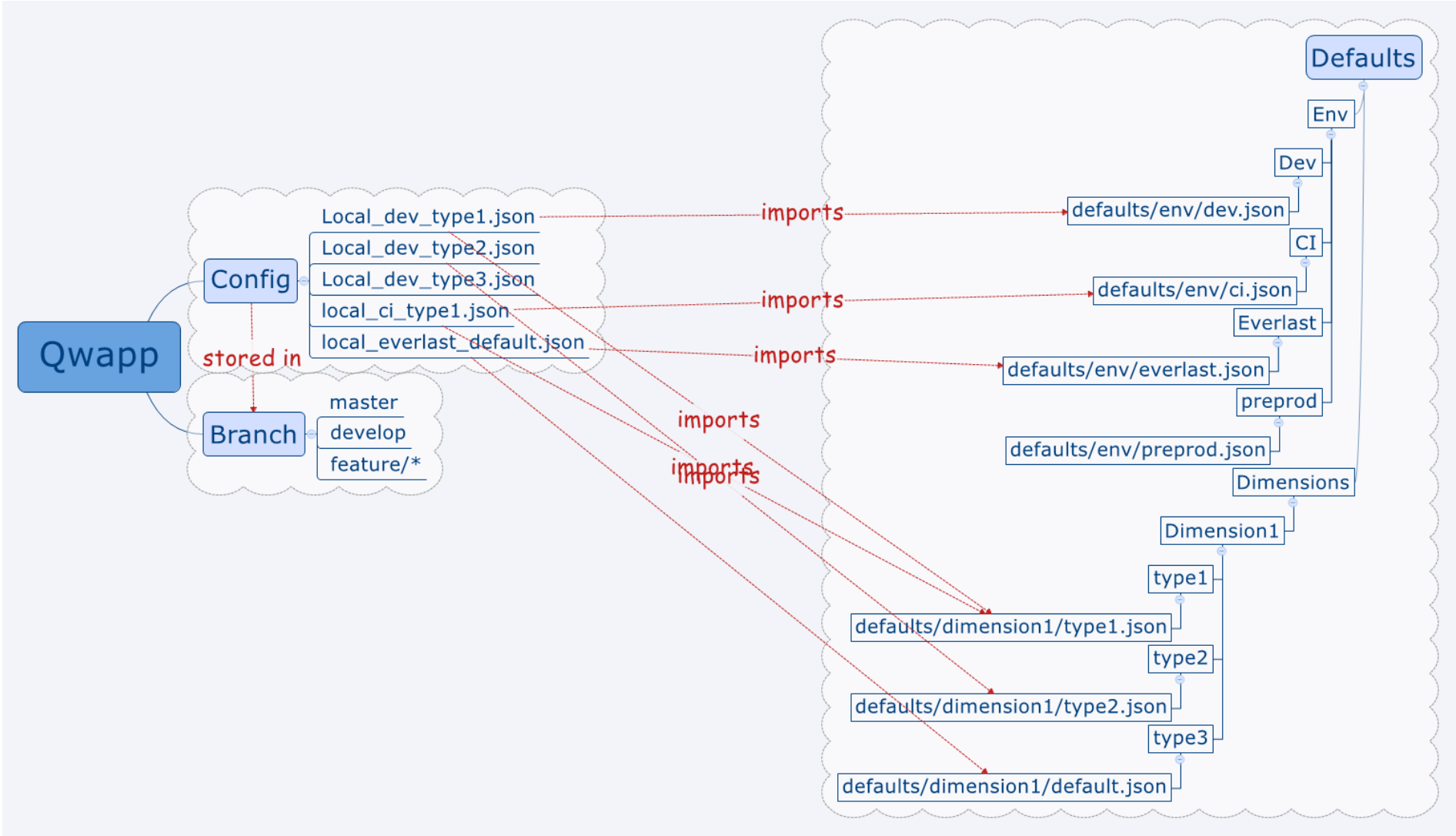
Qwapp Main Concepts & Articulation



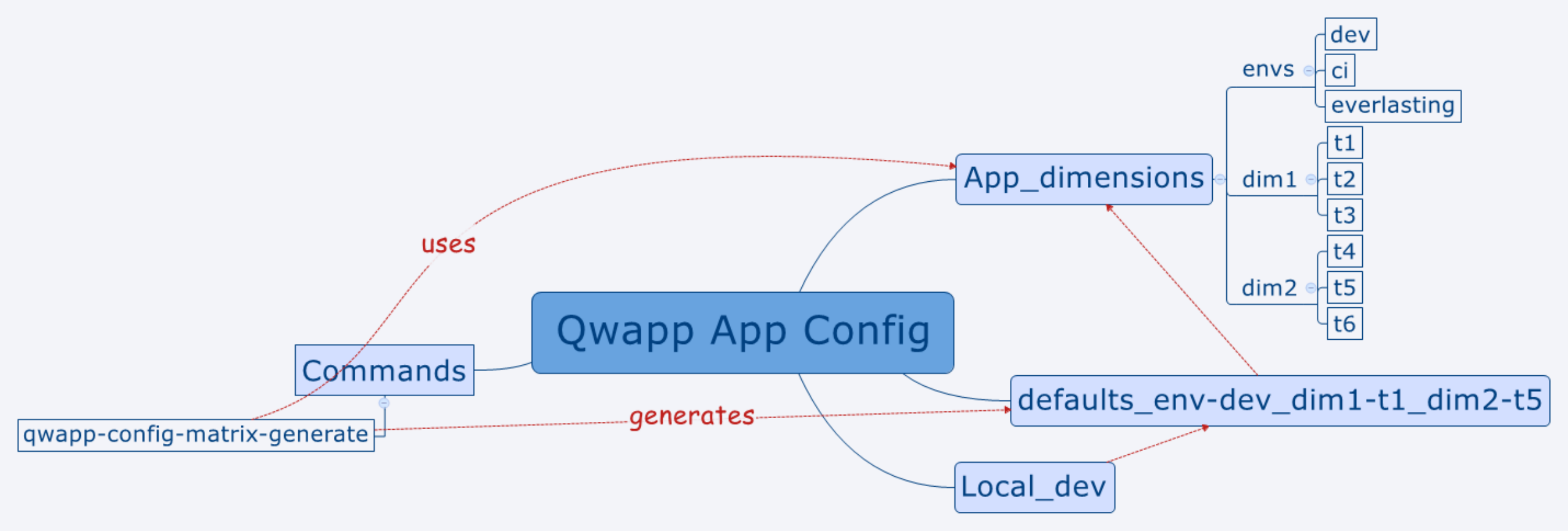
Integrability made by configurability

- local.config_dev.json used by devs
- local.config_ci.json used on CI infra
- Any new env can be added
- Hierarchical cascaded config
  - allowing overloading
  - and parameterization
  - Specification of dimensions within dedicated config files

Qwapp Config Mechanism



Qwapp Config Generation



Qwapp Config Benefits

- Roughly, App dimensions specifications allows spawning envs to test each combinatorial specs
  - Devices x browsers x screen dimensions x features to test x …
  - Qwapp- should be able to update jenkins jobs with matrix projects
- This could be next step for CI.
  - Anyone interested ?
  - We hire.

Templated Configurability

- Using .infra/scripts/generate-config.sh
  - ENV, BRANCH, USER, CIKIND
  - Generates config/local.config_$ENV.json
  - Generates config/php/local.config_$ENV.json
  - Should be replaced by qwapp- command & project-specific endpoints
- Used to generate local config when git clone'ing the project
  - Local config for specified –env at build
  - Should be replaced by qwapp- command & project-specific endpoints
  - Endpoints are shell scripts or js modules to be ran

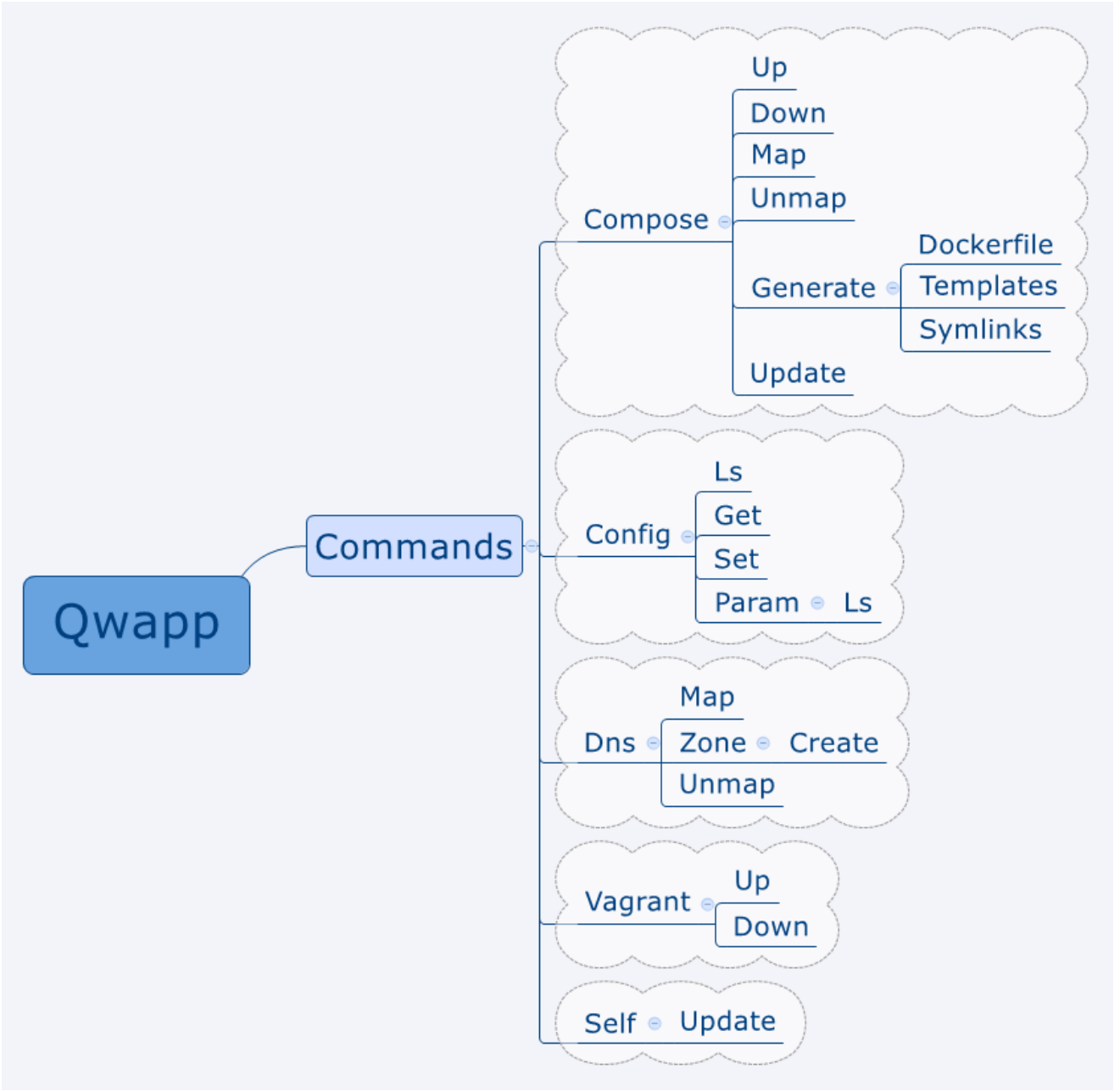
Multi-platform development

- Vagrant box for devs https://git.qwant.ninja/devops/vagrant-dev.git
  - Qwapp'ized app
- Using docker in a vagrant
  - Self-contained linux boxes
  - Integrates with its environment via configuration
- Using Puppet code to deploy vagrant dependencies
  - Allows to add more target-specific platforms (Windows, Macosx, Linux distros)

Integrated development

- Can deploy all infra services on vagrant boxes
- Allows isolation of devs, testings, updates
  - Can create a vagrant box to dev next version of infra tools
  - Without poisoning CI production infra

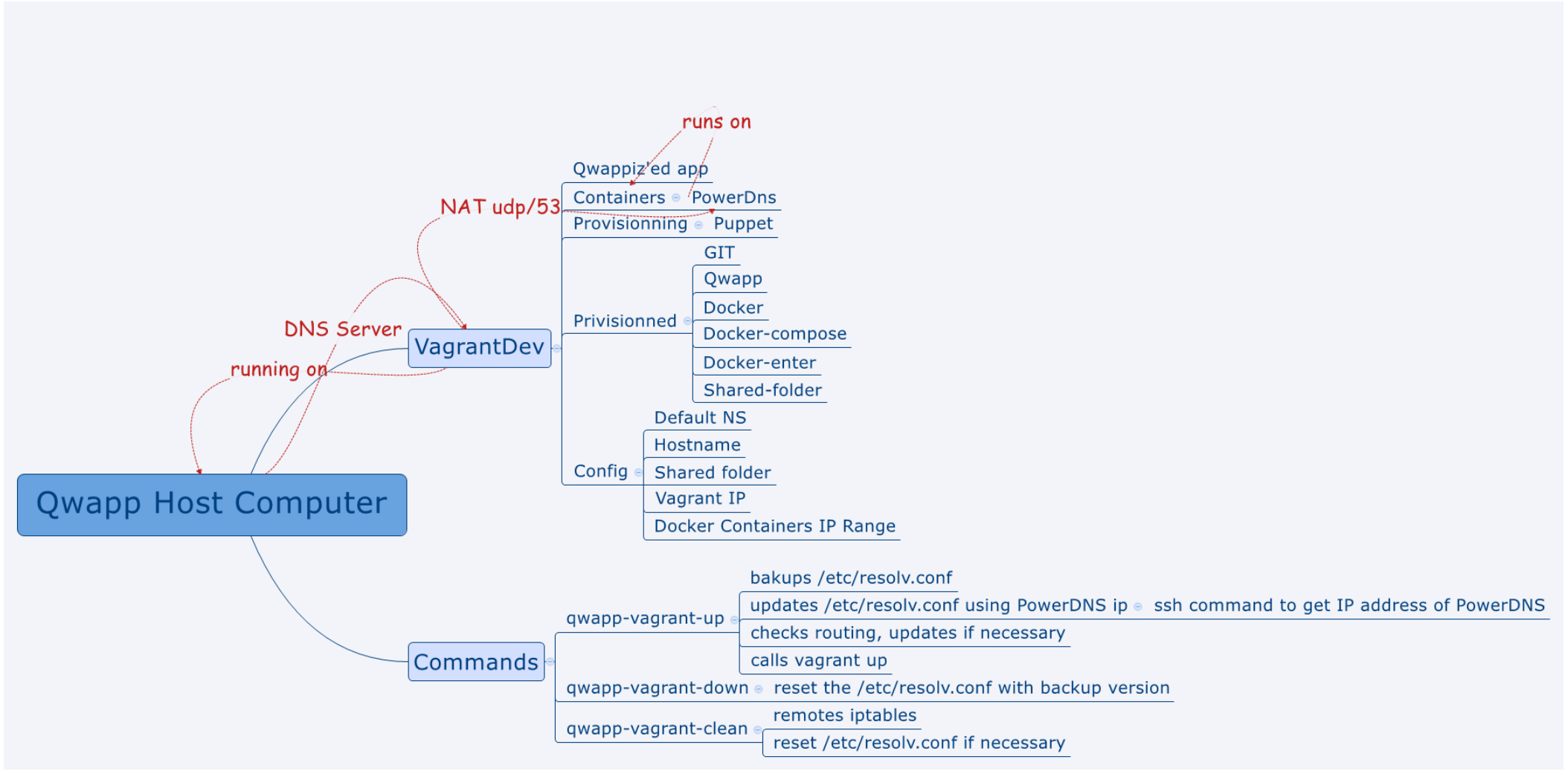
Qwapp CLI Commands



Qwapp & Vagrant

- Qwapp uses Vagrant boxes to provides uniformized dev platforms
  - Out of the box provisionning
  - Versioned, soon-to-be CI'ed too
- Provides command line interfaces
  - Up, down, clean
  - Taking care of much everything
- VagrantDev also provides DNS server
  - Via container in the vagrant
  - Host computer uses vagrant's IP to resolve DNSes
  - ISP/other DNSes are configurable
    - They will be used as DNS server to forward requests to : proxy

Qwapp & Vagrant (cont'd)



Qwapp CLI commands

Qwapp-compose-up

- Loads up an environment using docker-compose

Qwapp-compose-down

- Downs previously loaded environment

Qwapp-compose-dns-map

- DNS mapping according to currently running composition

Qwapp-compose-dns-unmap

- DNS unmapping according to currently running composition

Qwapp-compose-update

- Updates loaded environment if necessary (unless –force)
- --dry tells what would have been done

Qwapp-compose-generate-docker

- Generates the docker file if necessary (unless –force)
- --dry outputs generated content to stdout

Qwapp-compose-generate-symlinks

- Generates symlinks if necessary (unless –force)
- --dry lists sources and targets of symlinks

Qwapp-compose-generate-templates

- Generates files from templates if necessary (unless –force)
- --dry outputs generated content to stdout

Qwapp-dns-map

- Calls a powerdns instance to map an IP to a FQDN

Qwapp-dns-unmap

- Calls a powerdns instance to unmap an IP to a FQDN

Qwapp-dns-zone-create

- Calls a powerdns instance to create a zone

Qwapp-config-ls

- Outputs the config of the qwapp for specified --env

Qwapp-config-create

- Replaces .infra/scripts/generate-config.sh

Qwapp-config-set

- Sets a value in the local.config_env (specifiable via –file)

Qwapp-config-get

- Sets a config value

Qwapp-config-param-ls

- List all usages of specified parameter in config

Qwapp-self-update

- Updates the qwapp app

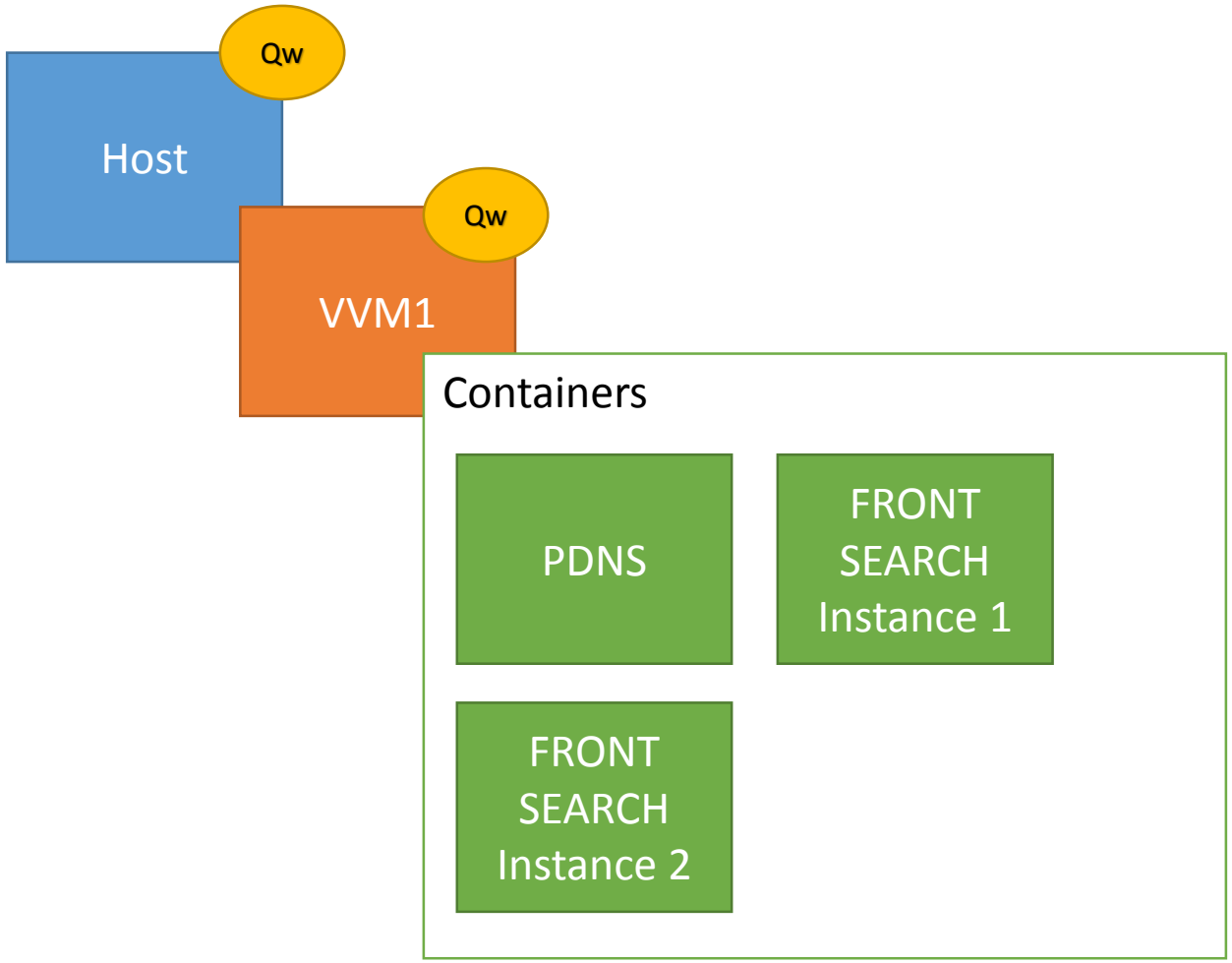
Qwapp-init

- Bootstraps a new project with --squeleton

Qwapp-clone

- Clones a project from a group of a gitlab instance

Qwapp usage



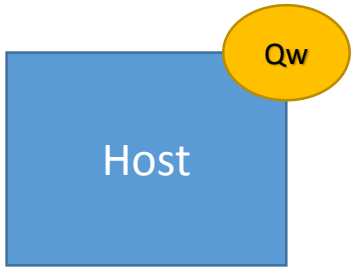
Qwapp app is installed on system, available to user

Host machine

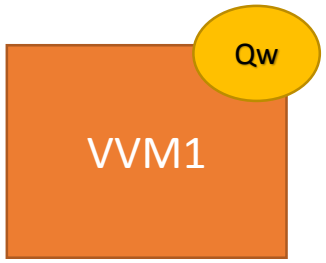
Containers running in VVM

Vagrant Virtual Machine

Docker Container

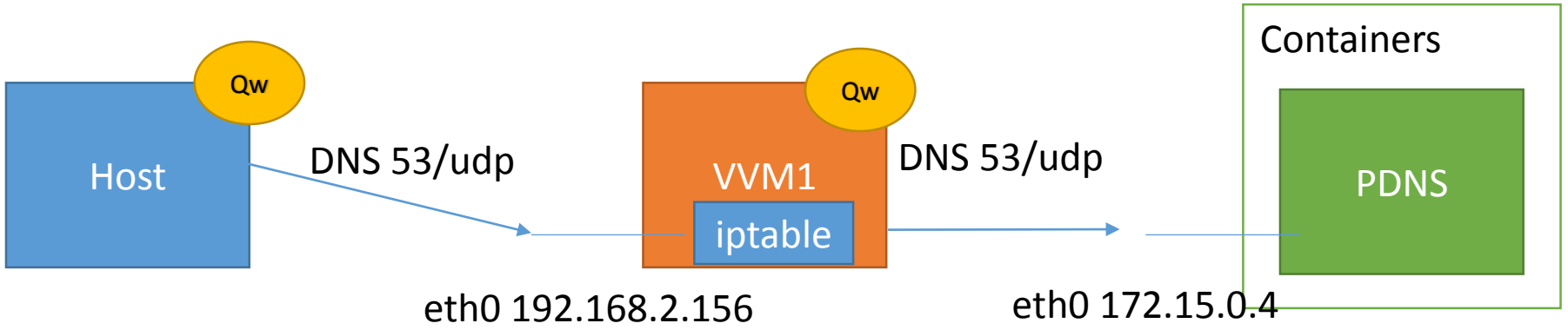


1. Install Vagrant
2. Install Virtual Box
3. Install Qwapp
    1. Git clone git+ssh
    2. . ./install.sh
4. Install Vagrant Dev
    1. Git clone git+ssh…
5. Register SSH keys on Qwant Gitlab



1. Create puphpet/custon-config.yml and customize it
    1. Set hostname, DNS server, VM IP, Docker containers subnet range, etc
2. Run command Qwapp-vagrant-up --init
    1. in vagrantdev working copy
3. Wait until provisionning is over

This will install a runnable VagrantDev.
VagrantDev Hosts uses the VVM as a DNS resolver.
That is why the custom config needs your DNS
A running vagrantdev host looks like this :



PDNS

1. Containers are deployed using qwapp-compose-up command
2. Deploying containers is one goal of qwappp-compose commands
    1. Generating
        1. Templates
        2. Symlinks
        3. Dockerfile