

# VMFest

**Wrapping VirtualBox to speedup dev  
and test since 2010**

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# Why

- **We develop Pallet, an Infrastructure Automation platform**
  - Multi OS
  - Builds clusters (Hadoop, Cassandra, etc)
- **We wanted to:**
  - Have automated and comprehensive test harness running on many OSs
  - Develop/build/test clusters on local VM
  - Build local clouds and save \$\$ and time

# What

- **Make VirtualBox behave like a lightweight cloud provider:**
  - Instantiate multiple VMs from the same image
  - Fast, with low disk usage
  - Configurable and programmable
  - Flexible hardware/network configs
- **Wrap the crazy OO API of VirtualBox with a saner Clojure one**

# Hardware DSL

```
{:memory-size 512
 :cpu-count 1
 :network [{:attachment-type :host-only
            :host-only-interface "vboxnet0"}
           {:attachment-type :nat}]
 :storage [{:name "IDE Controller"
             :bus :ide
             :devices
               [nil nil {:device-type :dvd} nil]]}]
 :boot-mount-point ["IDE Controller" 0]}
```

# API

```
(use 'vmfest.manager')  
(def my-server (server))  
  
(def my-machine  
  (instance my-server "my-vmfest-vm"  
    :ubuntu-12.10 :micro))  
  
(start my-machine)  
(pause my-machine)  
(resume my-machine)  
(stop my-machine)  
(destroy my-machine)
```

# fun

```
(def machines
  (doseq [n (range 15)]
    (instance my-server
      (str "node-" n)
      :ubuntu-12.10 :micro)))

(map start machines)
```

# little-fluffy-cloud

- A RESTful & cloudy api for vmfest
- A cloud in your laptop!

```
$ curl -X POST -H "Content-Type: application/json"\  
http://localhost:3000/vms/test-01\  
-d '{"image": "debian-6.0.2.1-64bit-v0.3", \  
    "hardware": {"cpus": 1, "memory": 512}}'
```

```
$ curl -X PUT -H "Content-Type: application/json"\  
http://localhost:3000/vms/test-01/start
```

- [github.com/pallet/little-fluffy-cloud](https://github.com/pallet/little-fluffy-cloud)

# visaje

- **Build VM images from data**

```
(install-os my-server
  {:name "debian-test-2"
   :disk-location "/tmp/debian-test-2.vdi"
   :disk-size (* 4 1024)
   :os-iso-location
     "/Users/.../debian-6.0.2.1-amd64-netinst.iso"
   :vbox-iso-location
     "/Users/.../VBoxGuestAdditions.iso"
   :preseed (slurp "/Users/.../deb-preseed.cfg")
   :user "vmfest"
   :password "vmfest"})
```

- **[github.com/palleteops/visaje](https://github.com/palleteops/visaje)**



# pallet-vmfest

- Develop config automation on vmfest, run it in the cloud

```
(def my-cluster (make-hadoop-cluster ...))
```

```
(create-cluster my-cluster  
  (compute-service :vmfest ...))
```

```
(create-cluster my-cluster  
  (compute-service :ec2 ...))
```

- [github.com/pallet/pallet](https://github.com/pallet/pallet)



# PalletOps

**Infrastructure Automation**

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**Clojure Development**

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<http://palletops.com>