



Java Power Tools: the cloud edition

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github [jclouds/jclouds](https://github.com/jclouds/jclouds)

agenda

intro

tools

questions

intro

Adrian Cole (@jclouds)

founded jclouds

cloud consultant

disclosure

you don't have to be a cloudie, although you might enjoy it.

compute cloud

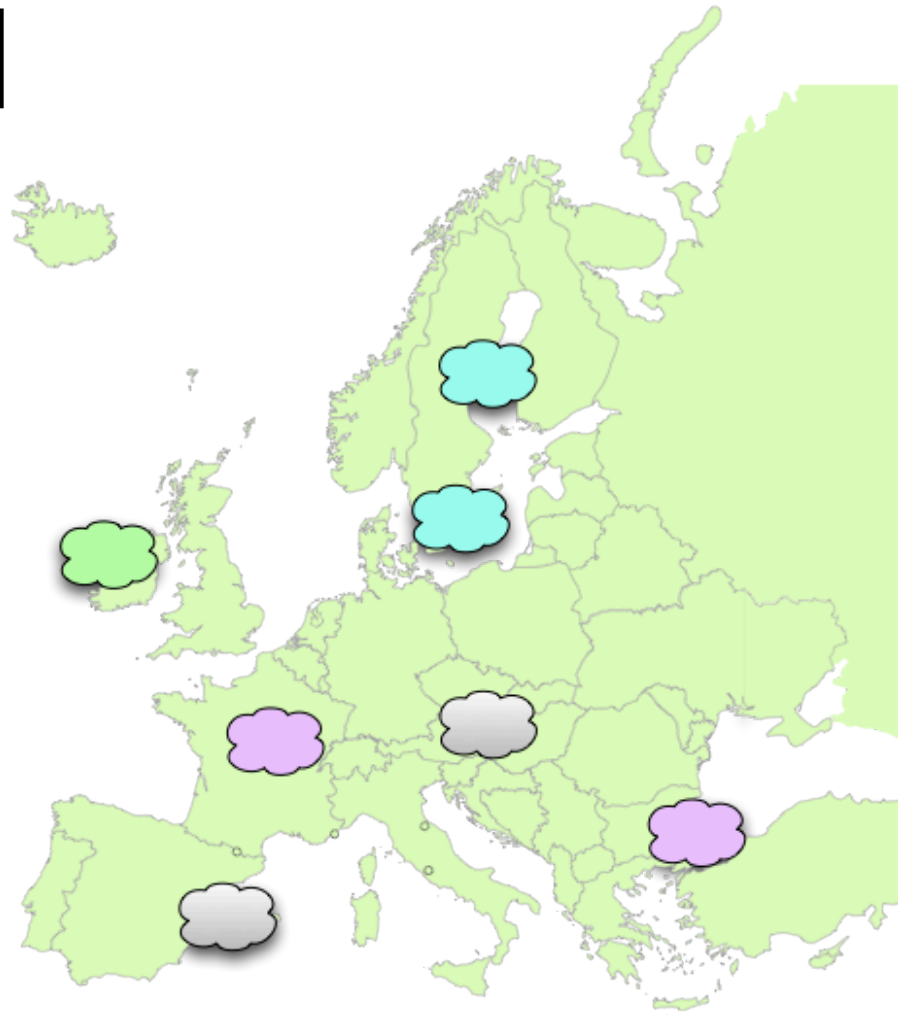
infrastructure as a service

soft & hardware catalog

on demand machines

priced per hour

multi-cloud



jclouds

multi - cloud library

open sourcecloud-provider agnosti

strong ecosystem

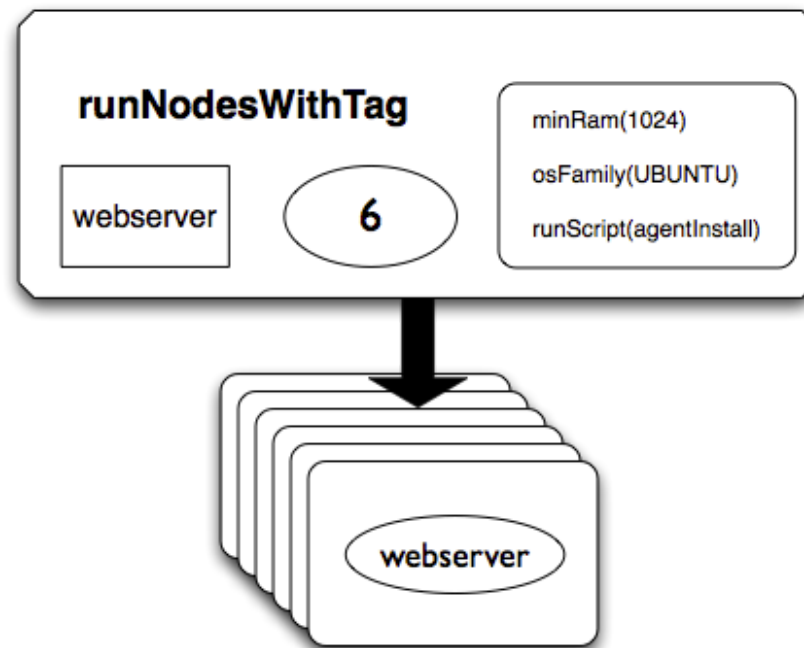


Templates abstractly describe nodes:

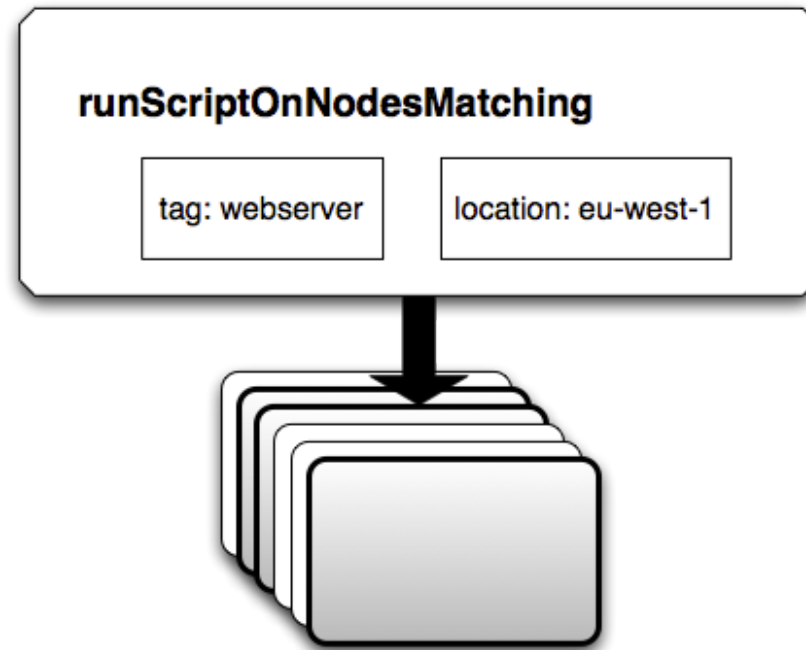
What OS to use, what versions...

What kind of hardware, what features are needed...

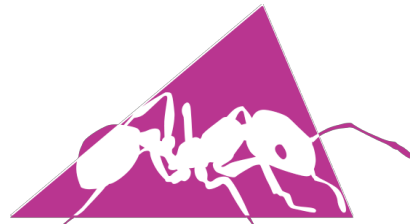
Tags organize identically configured nodes in groups



Operate based on predicates



jclouds power tools



arquillian

unit test your **deployment**

choose your container

cloud is an **option**

arquillian cloud container

jboss/arquillian

```
@Deployment
public static JavaArchive createDeployment()
{
    return ShrinkWrap.create(JavaArchive.class)
        .addPackage(ServiceManager.class.getPackage())
        .addManifestResource(EmptyAsset.INSTANCE, "beans.xml");
}

@Inject
private ServiceManager manager;

@Test
public void shouldBeAbleToExecuteAndInject() throws Exception
{
    Assert.assertNotNull(manager);
    Assert.assertEquals("Hello", manager.sayHello());
}
```

```
<cloud:container>
  <cloud:provider>gogrid</cloud:provider>
  <cloud:identity>apikey</cloud:identity>
  <cloud:credential>passcode</cloud:credential>
</cloud:container>
```

ant compute task

`nodes` on demand

bootstrap with `runscript`

control the `cloud`

ant compute task

github jclouds/jclouds

```
<compute actions="destroy,create" provider="{url}"> <nodes  
tag="web-prod" os="UBUNTU" hardware="SMALLEST"  
runscript="bootstrap"  
    openports="22,8080"                hostproperty="host"  
usernameproperty="username" /></compute>
```

hudson plugin

under construction

build on alternate **platforms**

offload your laptop

the **cloud** is your slave

hudson jclouds plugin

java.net/hudson

Cloud

☰ **EC2**

Identity

Credential

Slave Templates

Slave Name

Description

Labels

Architecture

OS Family

List of configurations to be launched as slaves

whirr

create and control **services**

like **hadoop**

cloud is a **cluster**

whirr

apache incubator

```
service = new ServiceFactory().create("hadoop");
spec = new ClusterSpec();
spec.setClusterName("myhadoopcluster"); spec.setInstanceTemplates
(ImmutableList.of(
  new InstanceTemplate(1,"nn","jt"),
  new InstanceTemplate(4,"dn","tt"))); cluster = service.launchCluster
(spec); proxy = new HadoopProxy(spec, cluster); proxy.start();
```

or if you like bash...

```
$ whirr launch-cluster --service-name=hadoop \
  --cluster-name=myhadoopcluster \ --
instance-templates='1 nn+jt 4 dn+tt'
```

pallet

build your **environment**

manage at runtime

cloud is **clojure**

pallet

github hugoduncan/pallet

```
(defnode webserver
  "Basic web app, served by tomcat"      {:os-family :ubuntu
:os-version-matches "10.04"
  :inbound-ports [8080 22]}      :bootstrap (phase (public-dns-if-no-
nameserver) (automated-admin-user))  :configure (phase
(tomcat)))  :deploy(phase (tomcat-deploy "webapp.war"))
(converge {webserver 1} :compute service)
```

github

jclouds/jclouds

Questions?

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<http://www.meetup.com/jclouds>