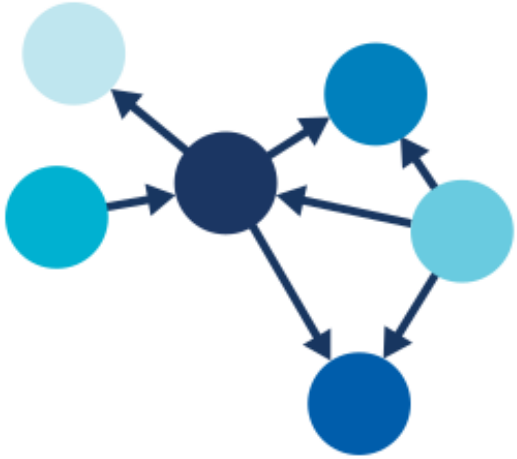
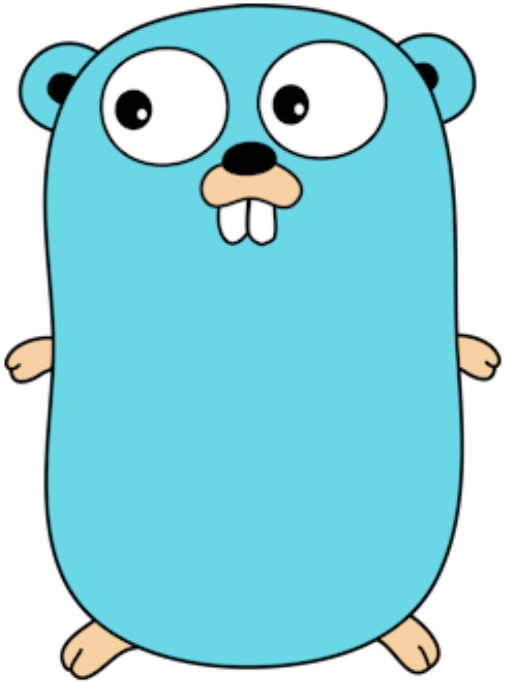
FELIX

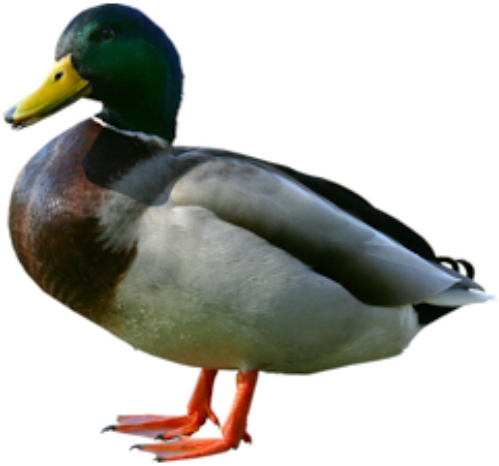
http://www.unbelievable-machine.com

p





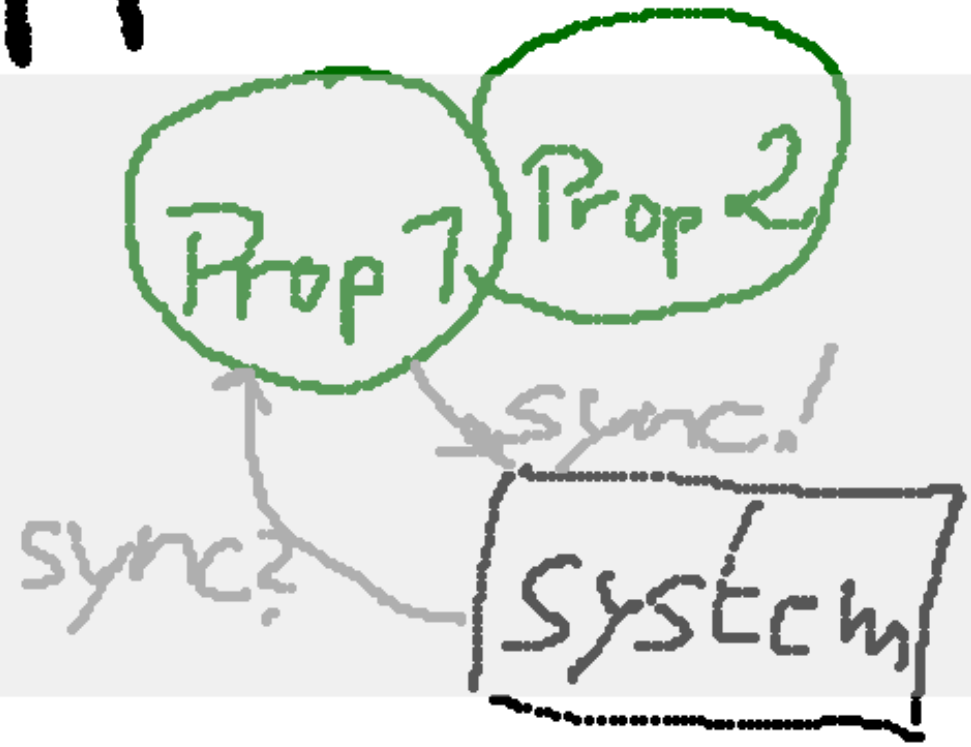
vs

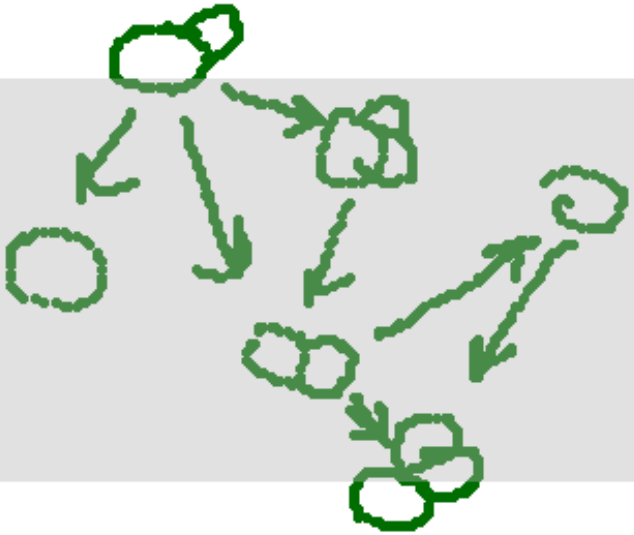


Gophers > ducks

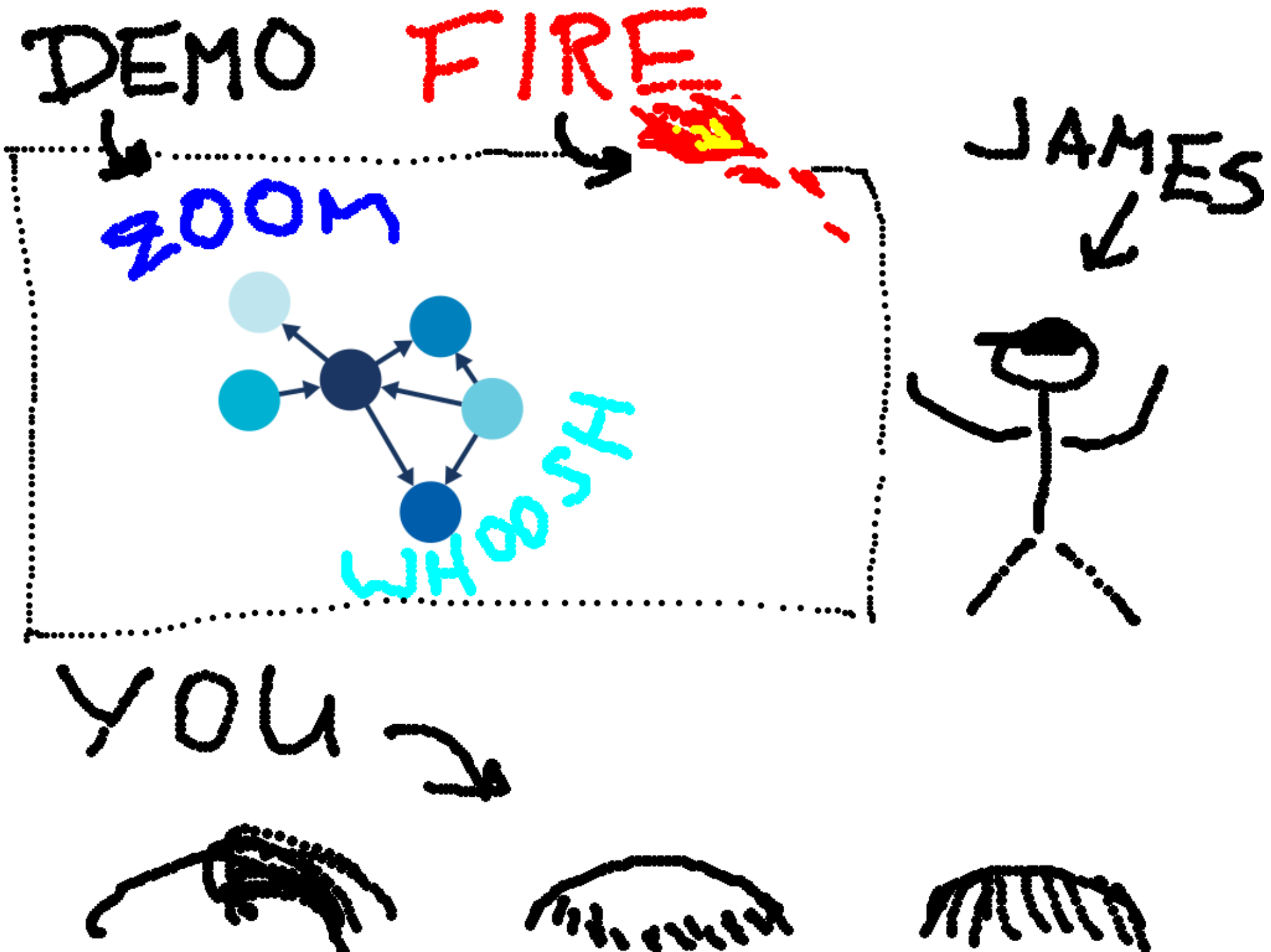
Puppet

Resources





Graph

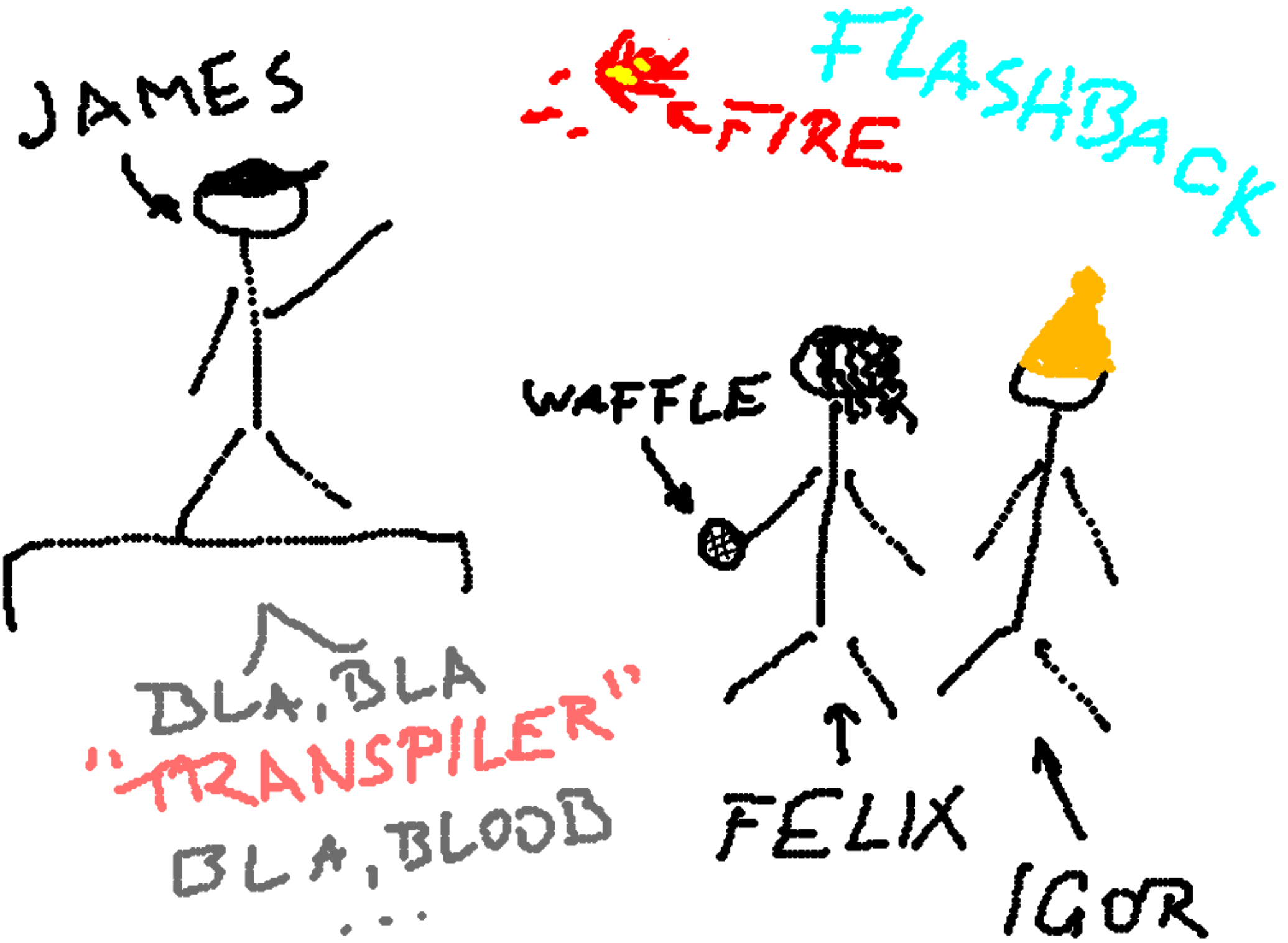

DEMO
FIRE
JAMES
ZOOM
WHOOSH
YOU

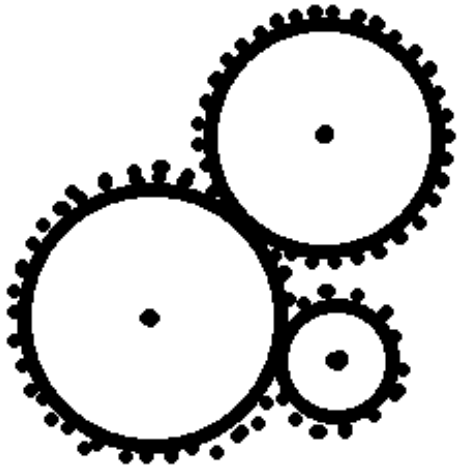
Infrastructure as data?

Nah!

Infra-structure as code!

```
$vhosts = hiera('apache_virtual_hosts')
$vhosts.each { |$vh|
  include apache
  if $vh['special'] { ... }
  apache::vhost { $vh:
    ...
  }
}
```


JAMES
FIRE
FLASHBACK
WAFFLE
BLA. BLA
"TRANSPILER"
BLA. BLOOD
...
FELIX
IGOR



files
"foo":

YAML

p

AGENT

FACTER

POST

req. catalog

MASTER

MASTER / "COMPILER"

REQUEST

CLIENT CERT DN

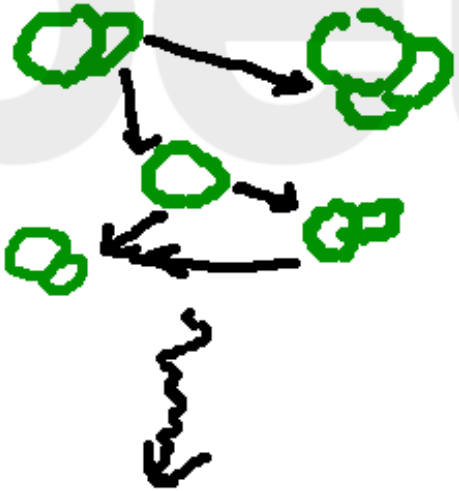
+

FACTS

⇓

MANIFEST

CATALOG



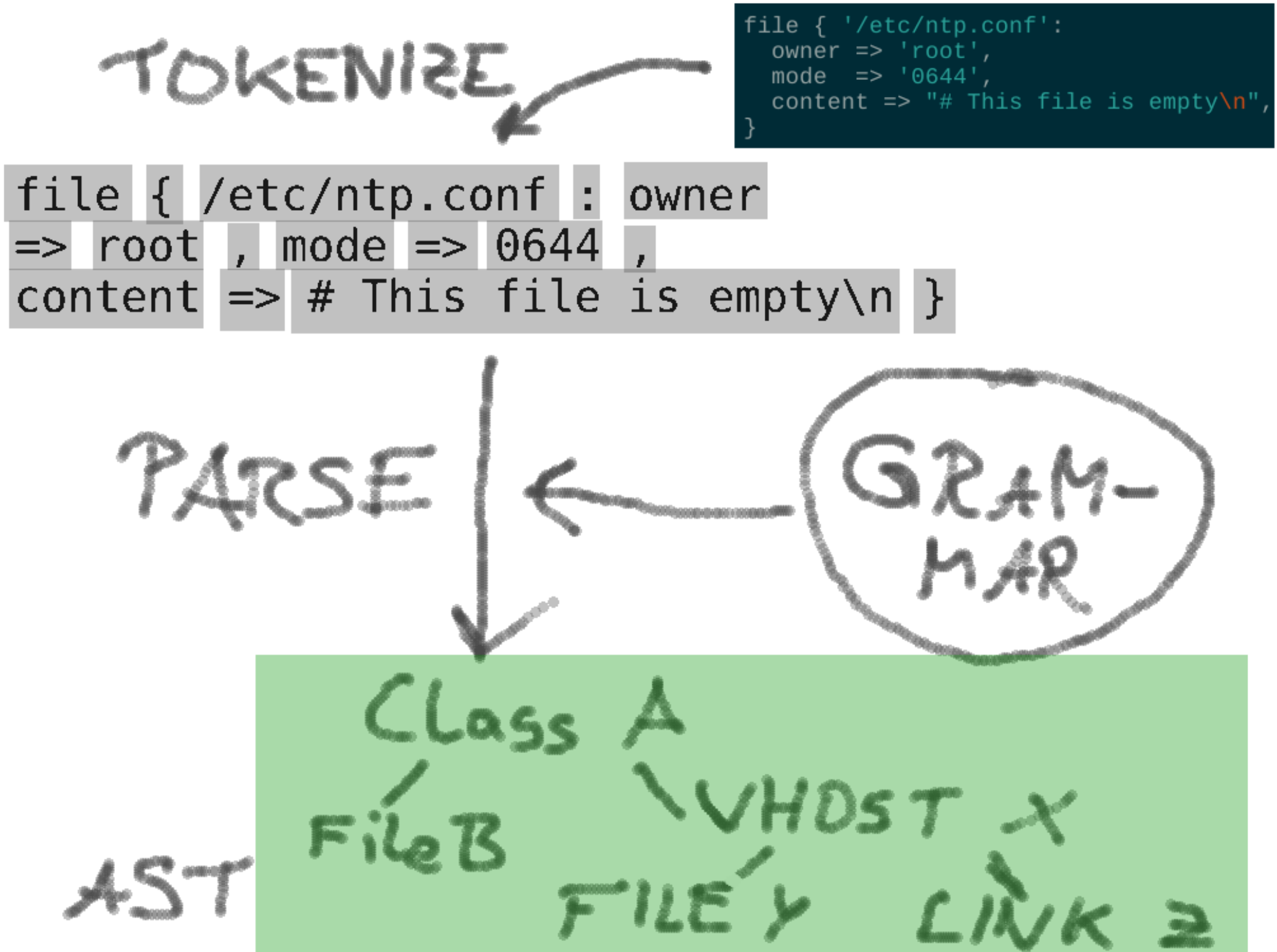
AGENT

IF THIS IS A RESOURCE

```
file { '/etc/ntp.conf':
  owner => 'root',
  mode  => '0644',
  content => "# This file is empty\n",
}
```

HOW CAN I PARSE IT?

```
BODY=$( sed -n '/file {/,/}/p' $MANIFEST \
    | sed '1s/.*{/{' )

TYPE=$( head -n1 $MANIFEST \
    | cut -d\{ -f1 \
    | tr -d ' ' )

MODE=$( echo $BODY | grep mode \
    | cut -d\> -f2 | tr -d ' ,' )
```


TOKENIZE
file { '/etc/ntp.conf':
owner => 'root',
mode => '0644',
content => "# This file is empty\n",
}
file { /etc/ntp.conf : owner
=> root , mode => 0644 ,
content => # This file is empty\n }
PARSE
GRAM-
MAR
AST
Class A
FileB
VHOST X
FILE Y
LINK Z

PUPPET CATALOG

```
{
  "type": "File",
  "title": "/etc/ntp.conf",
  "parameters": {
    "owner": "root",
    "mode": "0644",
    "content": "# This file is empty\n"
  }
}
```

```
{ "file":
  [
    { "name": "file1",
      "path": "/etc/ntp.conf",
      "owner: "root",
      "content": "# This file is empty\n"
    }
  ]
}
```

MGMT GRAPH

```
package { "cowsay":
  ensure => "installed",
}
->
exec { "/usr/games/cowsay It works": }
```

package

exec

dependency

```
---
graph: fflaptop.local
comment: generated from puppet catalog for fflaptop.local
resources:
  pkg:
  - name: cowsay
    state: installed
  exec:
  - name: "/usr/games/cowsay It works"
    cmd: "/usr/games/cowsay It works"
    timeout: 300.0
    shell: "/bin/bash"
    watchshell: "/bin/bash"
    ifshell: "/bin/bash"
    watchcmd: 'while : ; do echo "puppet run interval passe
    state: present
    pollint: 0
edges:
- name: Package[cowsay] -> Exec[/usr/games/cowsay It works]
  from:
    kind: pkg
    name: cowsay
  to:
    kind: exec
    name: "/usr/games/cowsay It works"
```

```ruby
PuppetX::CatalogTranslation::Type.new :service do
  spawn :name do
    @resource[:name]
  end

  rename :ensure, :state do |value|
    case value
    when :running, true, :true
      :running
    else
      :stopped
    end
  end

  rename :enable, :startup do |value|
    if value == true || value == :true
      :enabled
    else
      :disabled
    end
  end
end
```

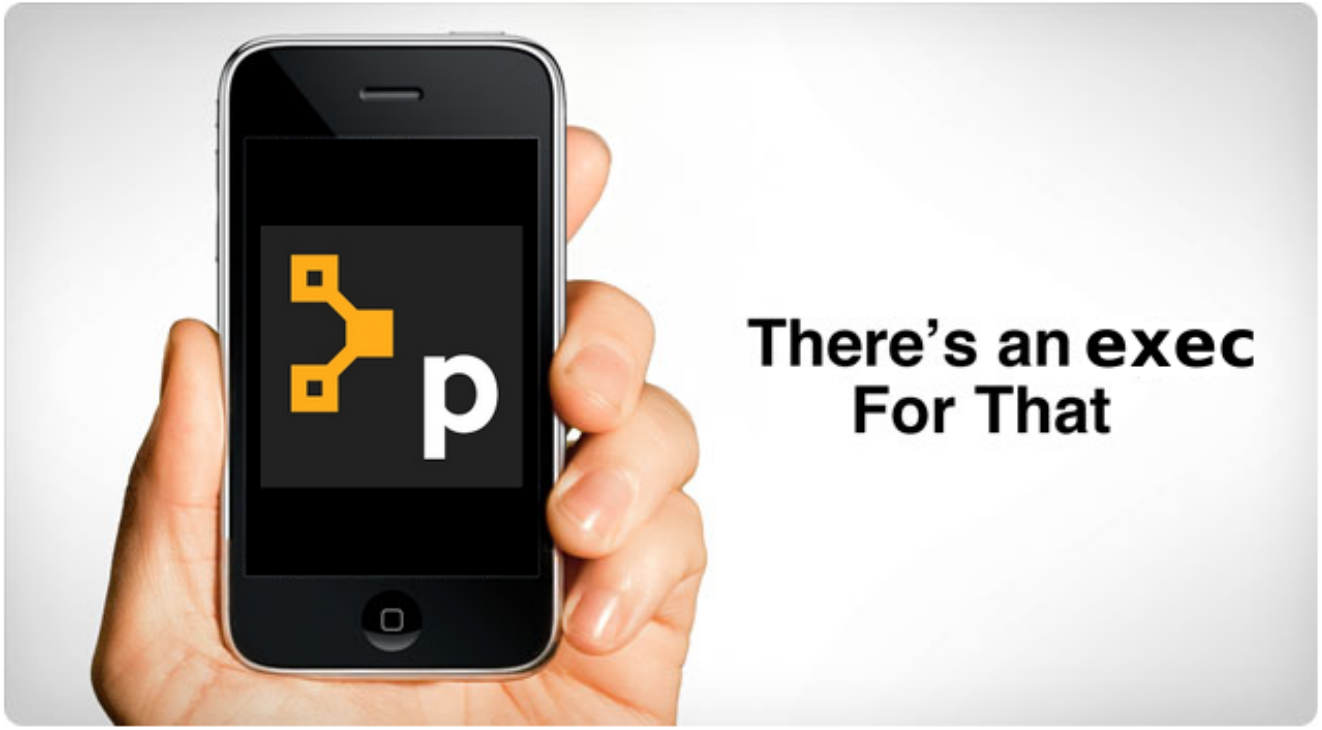
```ruby
module PuppetX::CatalogTranslation::Type.new :file do
  spawn :name do
    @resource.title
  end

  spawn :path do
    if @resource[:ensure] == :directory
      @resource[:name] + "/"
    else
      @resource[:name]
    end
  end

  rename :ensure, :state do |value|
    case value
    when :present, :file, :directory
      :exists
    when :absent
      :absent
    else
      raise "cannot translate file ensure:#{value}"
    end
  end

  spawn :content do
    if @resource[:ensure] == :directory && !@resour
      source = @resource[:source][0].sub(/^file:/,
      if @resource[:source].count > 1
        Puppet.err "#{@resource.ref} uses multiple
        ''
      elsif source =~ /^puppet:/
        Puppet.err "#{@resource.ref} uses a puppet
        ''
      else
        source
      end
    elsif @resource.parameters[:content]
      @resource.parameters[:content].actual_content
    end
  end
end
```

mgmt: dir has trailing slash

com-plexity

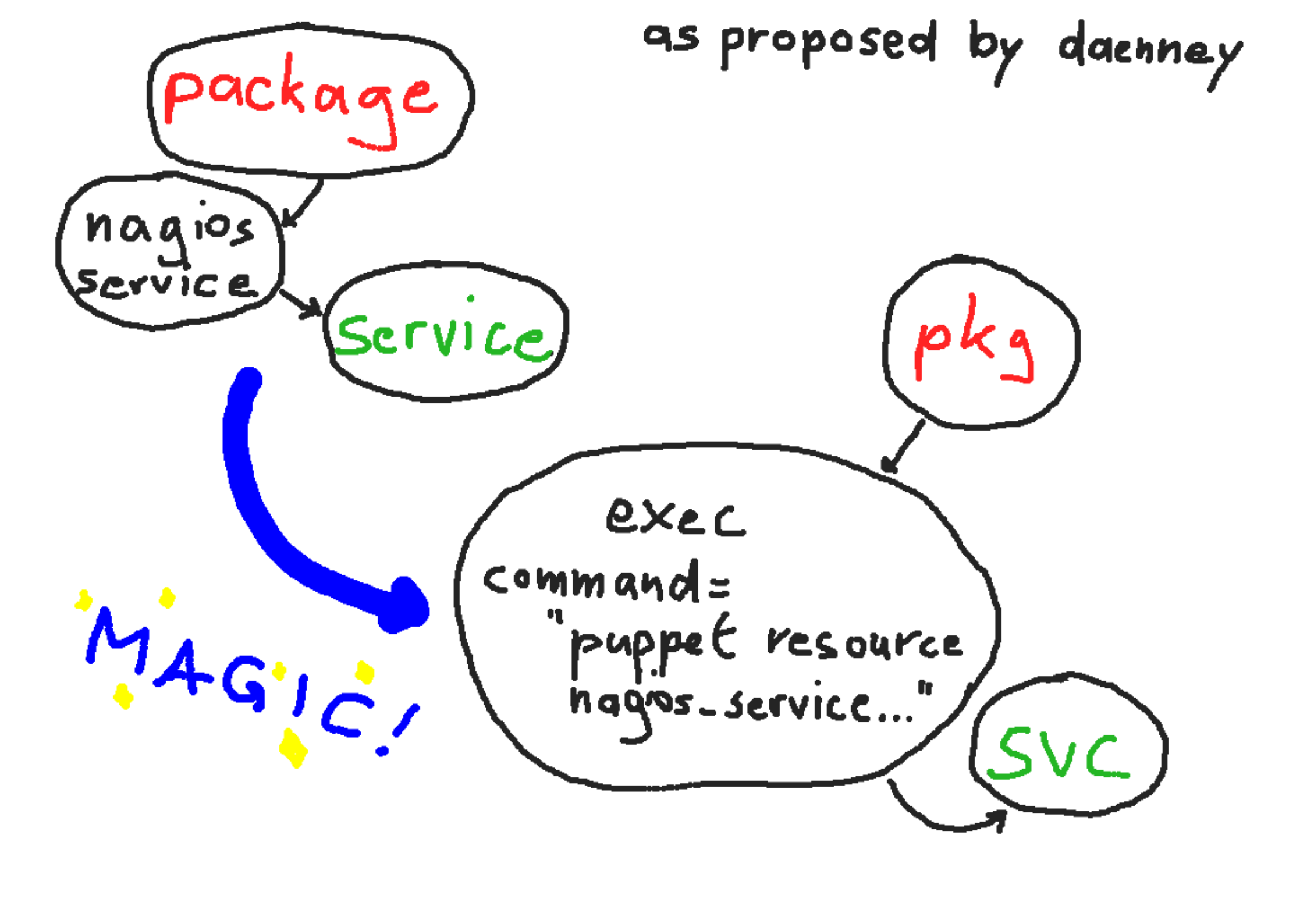
NO TRANSLATION?

WELL,



puppet resource

```
puppet resource nagios_service HTTP \
  ensure=present use=simple_http_check \
  host_name=app03-wp02 contact_groups=care-bears
```

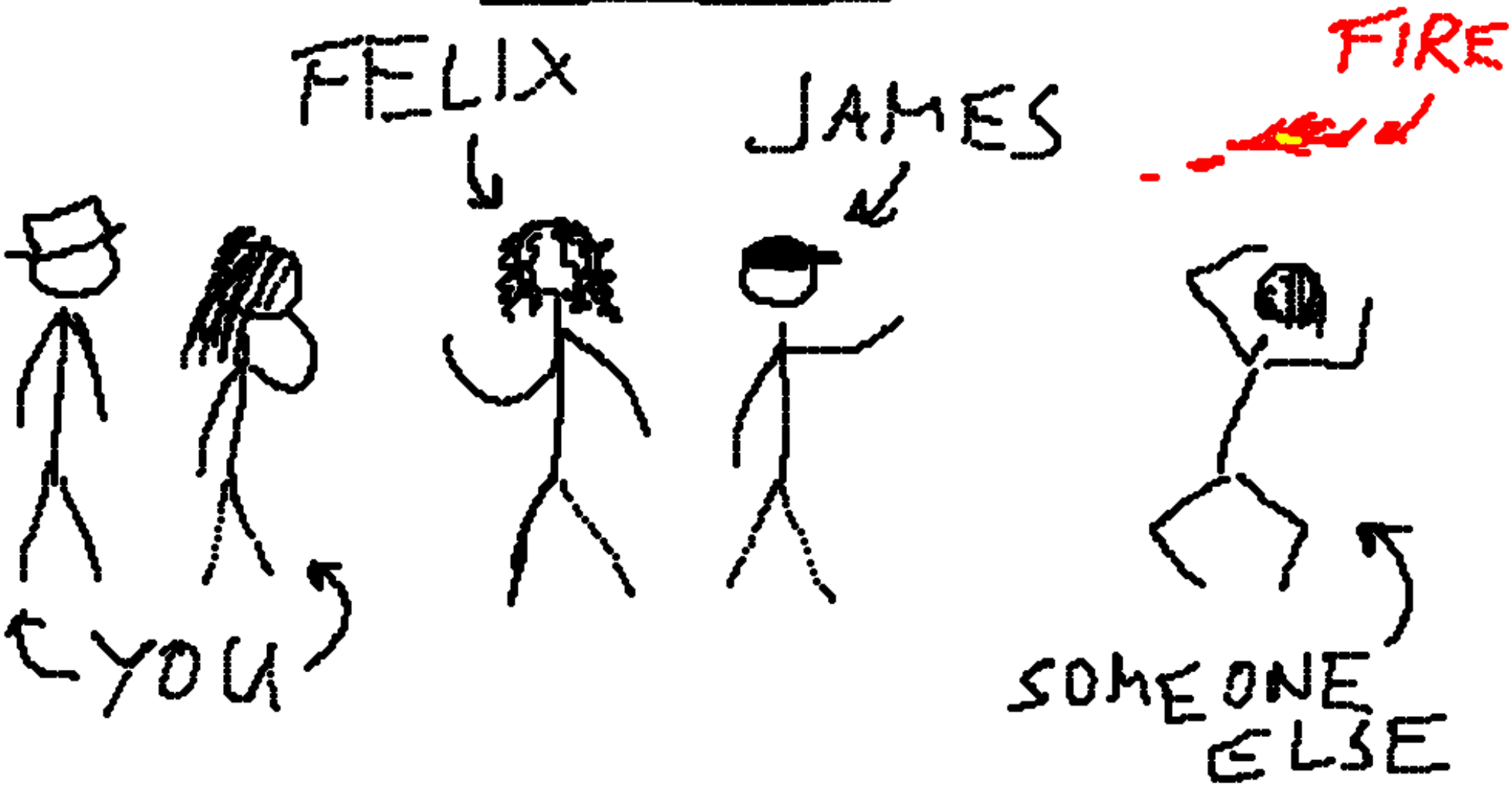

as proposed by daenney
package
nagios service
Service
pkg
exec
command=
"puppet resource nagios_service..."
svc
MAGIC!

YMCA

It's harder in other languages.

http://uberhumor.com/language-barriers

NO Q&A



CATCH US DURING BREAK