# FrontLoader

distributed load testing

# What is it?

FrontLoader is a flexible distributed load tester with support for system monitoring and a full web interface. Originally designed for testing RTMP services, it is particularly suited for protocols that require long-lived connections. However, short-lived protocols like HTTP can be tested easily as well.

# Features

- Includes a powerful monitoring framework that lets you collect real-time information from a remote server (e.g. CPU usage, memory usage) or even an entire cluster.
- An extensible connection system that makes testing almost any kind of service possible
- Configure and run your tests using the web interface. Then watch the results in real-time.
- Statistical analysis of the resulting data lets you see what factors affect your cluster's performance.

# Scenarios

```
monitor do
  local        # use local monitoring (the default)
  role "web"   # monitor hosts in the web role using these settings
  role "mysql" # ditto for mysql role
  host "12.42.44.12" # add a single host to monitor

  watch :cpu => 2 # run the CPU watch with priority 2
  watch :mem => 1
  watch :socket => 0.5
end

test :time => 120, :repeat => 1 do
  urls = ["http://site.com/page1", "http://site.com/page2"]
  500.times{|_|
    start :HttpConnector, :url => urls[rand % url.size]
    wait rand
  }
  wait_until_done
end
```

# Watchers

```
class SocketWatcher < FrontLoader::Watcher
  name "socket"

  shell "ls -l /proc/*/fd | grep socket | wc -l", :sudo => true do |count|
    log :sockets => count.to_i unless count.to_i == 0
  end
end
```

# Connectors

```
require 'em-http'

class HTTPConnector < FrontLoader::Connector
  option :url, :type => :text, :help => "The URL that will be
accessed"

  def start opt
    @connections ||= []
    @counter ||= 0
    counter = (@counter += 1)
    http = EM::HttpRequest.new(opt[:url]).get
    log_started :id => counter
    http.callback do
      log_connected :id => counter
      log_disconnected :id => counter
      @connections.delete http
    end
    http.errback do
      log_failed :id => counter
    end
    @connections << http
  end

  def stop
    @connections.each{|c| c.close_connection} if @connections
  end
end
```

run watch analyze

scenarios

devices

new

advanced editor

general

name devices

time 120

max load 10

rate 3

repeat 1

monitoring

roles

hosts roomtrol-allb004.class, room

connections

connector HTTPConnector

url http://roomtrol-allb004.class

run

run watch analyze

scenarios

devices

new

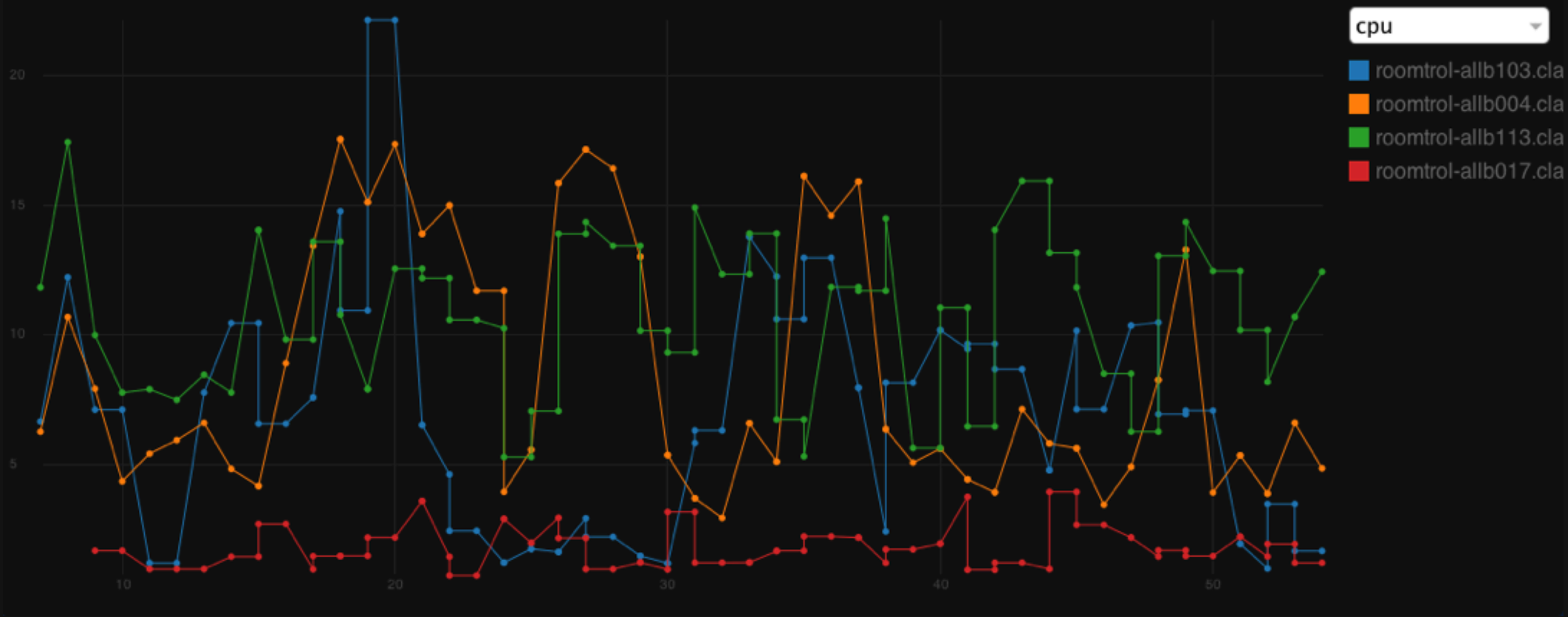
```
# Define your scenario here using the scenario DSL

monitor do
  host 'roomtrol-allb004.class'
  host 'roomtrol-allb103.class'
  host 'roomtrol-allb003.class'
  host 'roomtrol-allb017.class'
end

test :time => 120, :repeat => 1 do
  load :FrontLoader::HTTPConnector, :load => 10, :rate => 3, :url => "http://google.com"
end
```

name devices run

run | watch | analyze

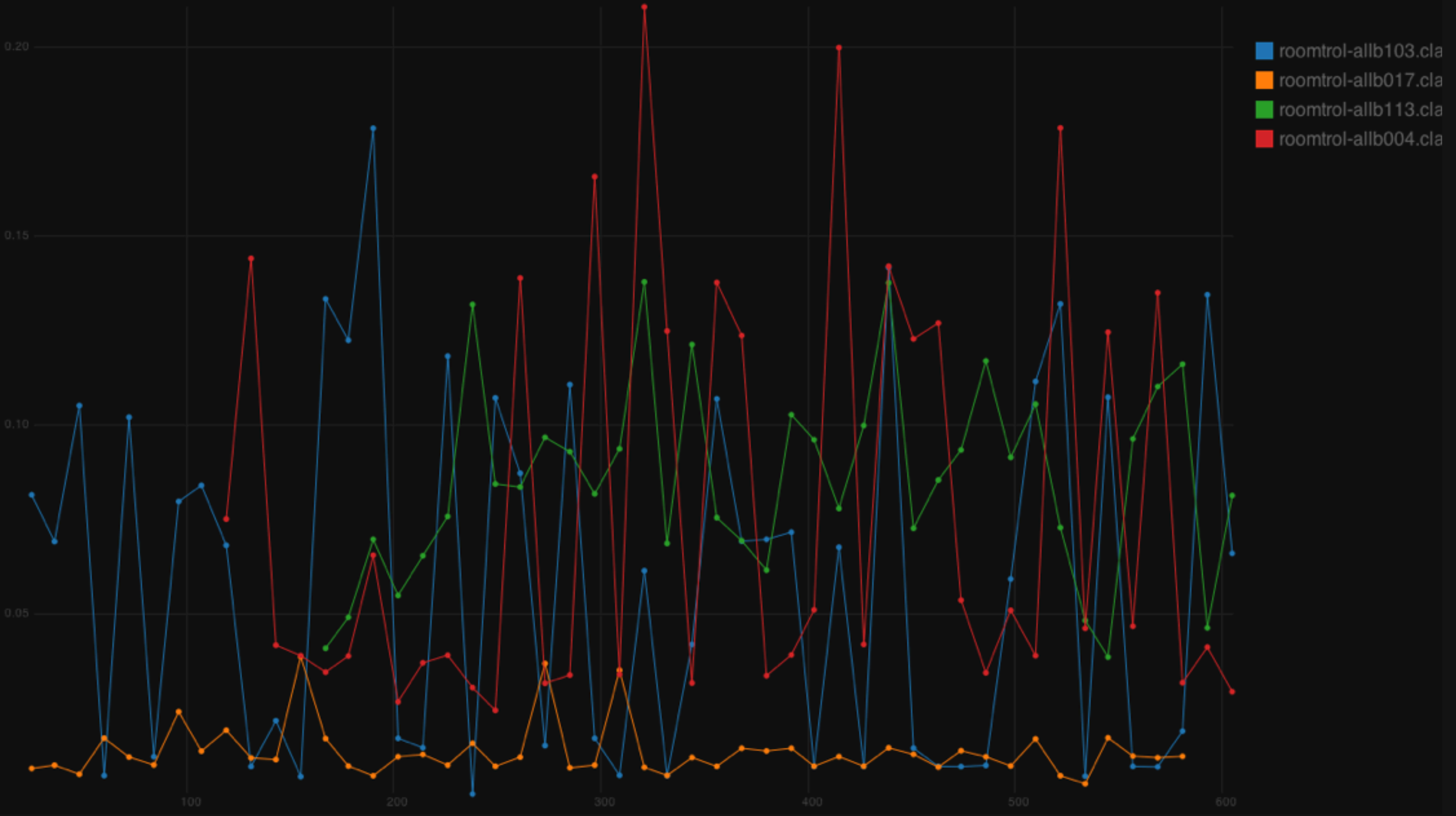
| scenario | test number | connections | avg length | failures | latency | time left | |
|---|---|---|---|---|---|---|---|
| devices | 1/1 | 0 | 0.01 s | | 0.01 s | 00:01:05 | stop |

| role | hosts | streams | cpu | load | mem | sockets |
|---|---|---|---|---|---|---|
| roomtrol-allb103.class | 1 | | 1.68% | 0.86 | 149.21 MB | 160.00 |
| roomtrol-allb004.class | 1 | | 4.87% | 0.54 | 536.66 MB | 114.00 |
| roomtrol-allb113.class | 1 | | 12.44% | 0.91 | 94.59 MB | 151.00 |
| roomtrol-allb017.class | 1 | | 1.23% | 0.37 | 58.54 MB | 140.00 |



run watch analyze

10/10/2011 0:00 (run) | time (explanatory (x)) | cpu:user (dependent (y)) | linear (model) | all (scope) | JSON | CSV



# demo

thanks to


for sponsoring this work