

# Connecting to the Cloud

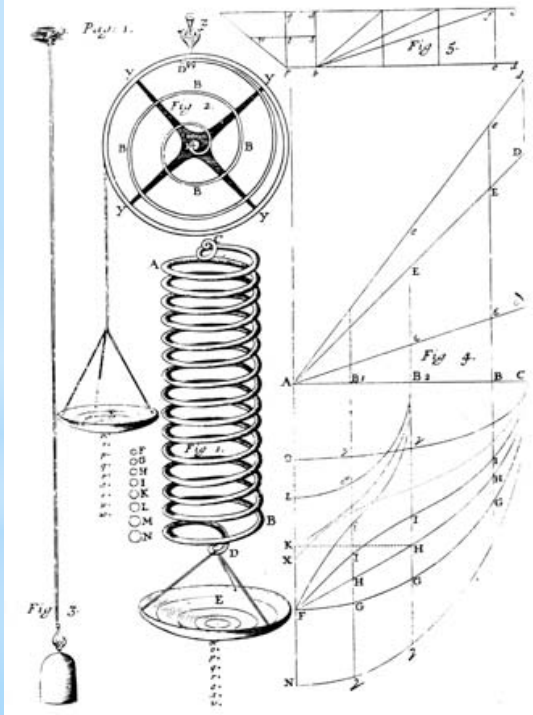
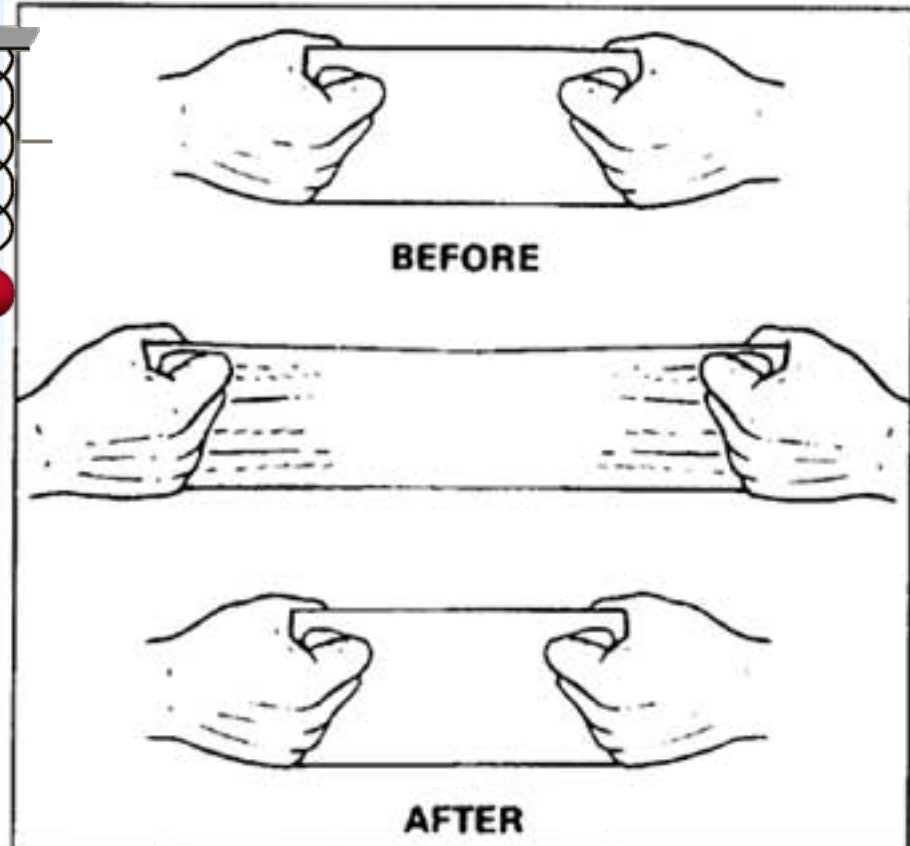
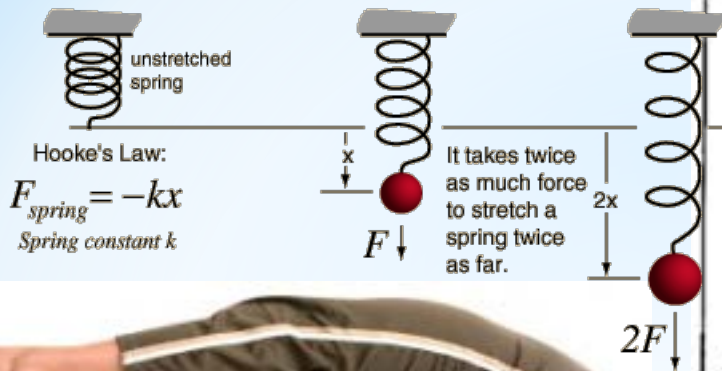
## \* HyperElasticity™

Handling Spike Events

Reza Rassool, CTO Kwaai Oak

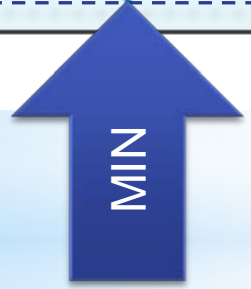
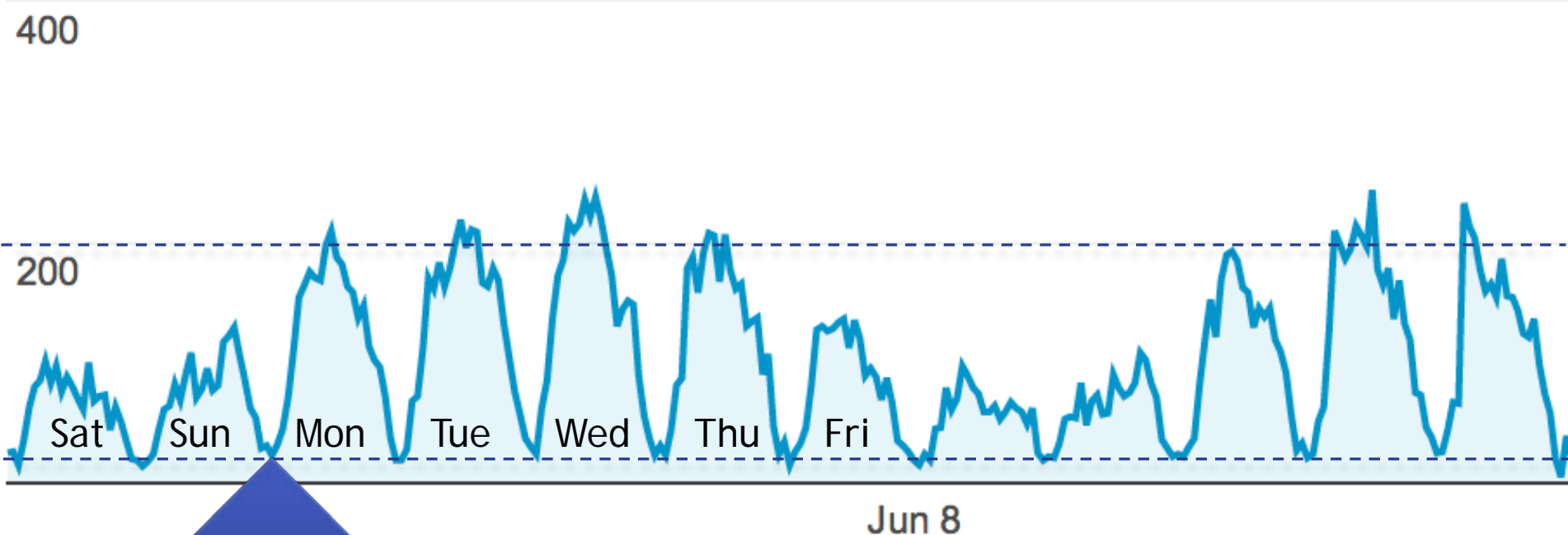


DCIA Conference within CES 2014

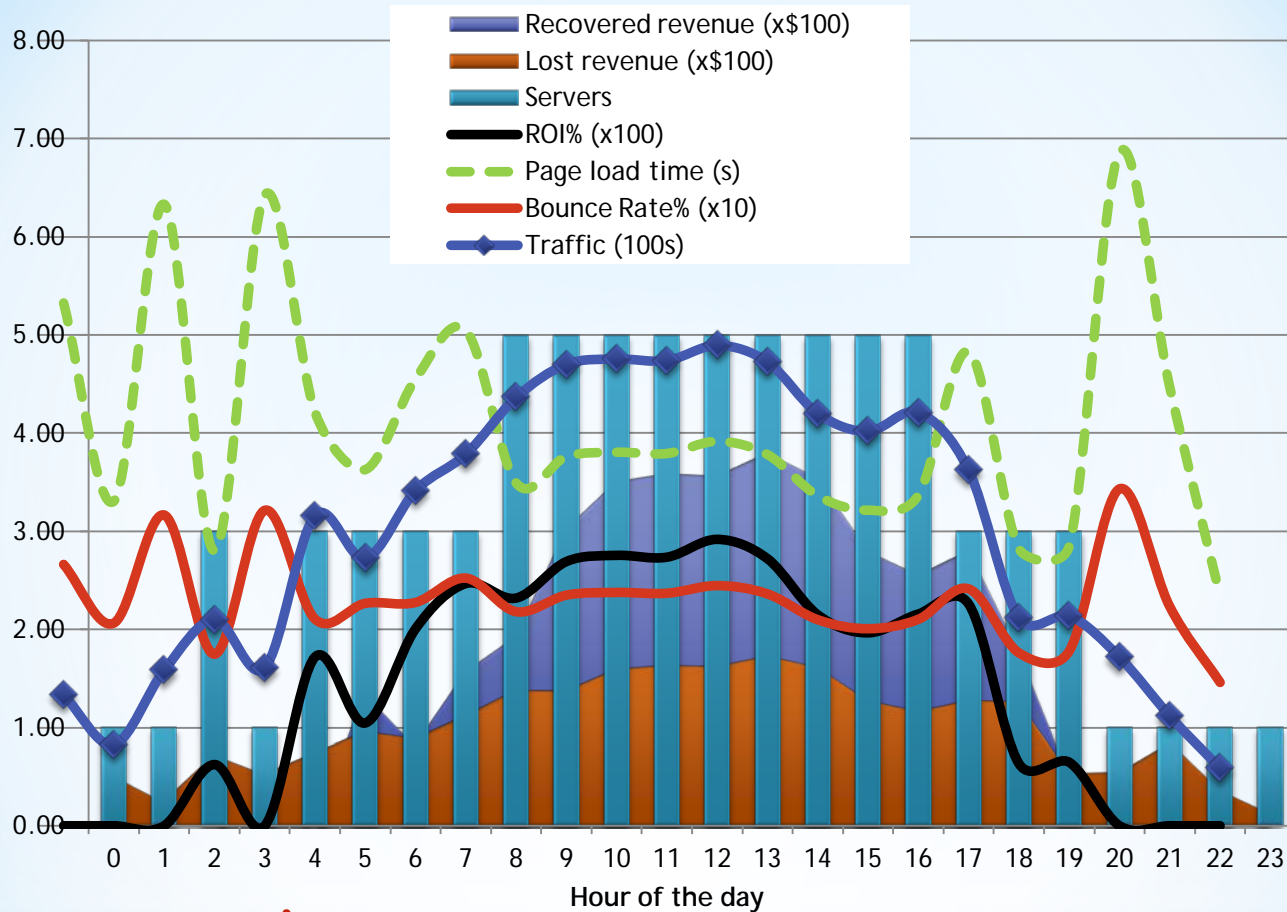


# \* What is Elasticity?

● Visits



\* **Varying Load**



# \* Elastic Auto-scaling



# \*What is HyperElasticity?

The New York Times  
 MORE THAN HONEY  
 GATHR  
 WIRE  
 IndieWire  
 The New York Times cloud elasticity can  
 grow with slowly moving roads



**Girl Rising**  
 One Girl Who Courage is A Revolution

**GATHR IT!**

**NOTIFY ME**

**RESERVATIONS 24**  
**STILL NEEDED TO TIP: 101**

BEVERLY HILLS, CA  
 LAEMMLE'S MUSIC HALL 3  
 THU, NOVEMBER 21, 2013 07:30 PM

**35 DAYS 19 HOURS**  
**55 MINUTES 24 SECONDS**

UPCOMING NEAR YOU

**PEARL JAM TWENTY**  
**A CAMERON CROWE FILM**  
 IN DALLAS  
 AT THE STUDIO MOVIE GRILL SPRING VALLEY

**TICKETING**

WED, NOVEMBER 13, 2013  
 AT 07:30 PM

**\$10**

**BUY**  
 your ticket(s)

**Green Light™**  
 Reservation quota has been met!

TICKETS: **55**  
 BOX OFFICE CLOSES IN: **5 DAYS 20 HOURS**

SEATS AVAILABLE: **85**  
**12 MINUTES 14 SECONDS**

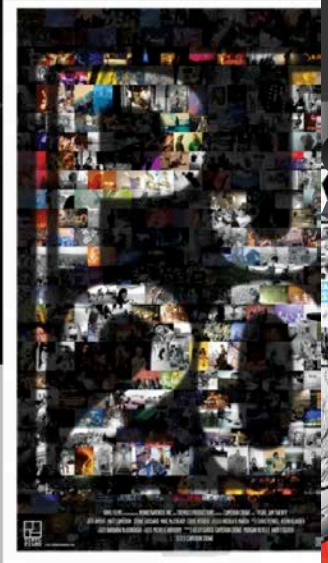
PRINT MY TICKETS

HOW DOES THIS WORK?

**MOVIE CAPTAIN:**  
**GATHR PRESENTS**

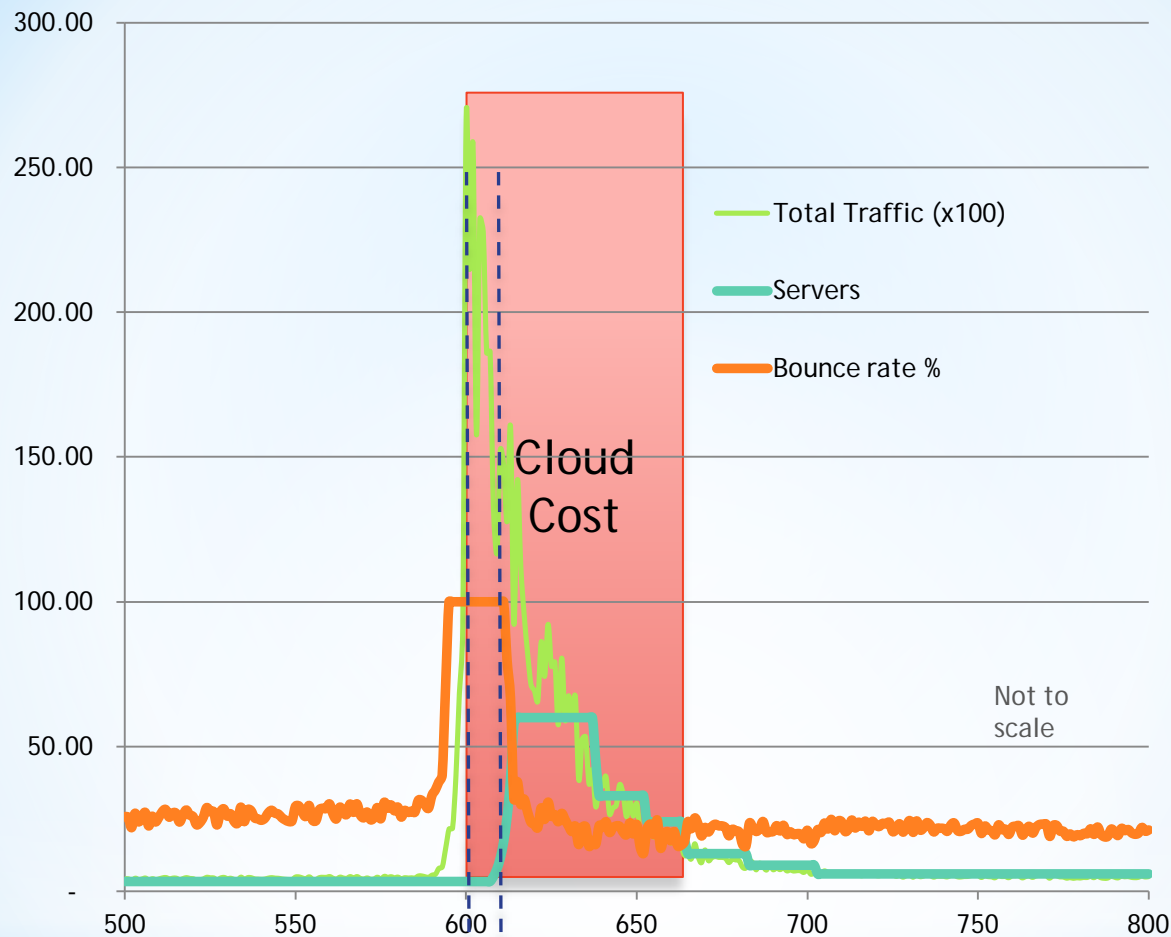
**WHERE:**  
 Studio Movie Grill Spring Valley (Screen TBD)  
 13933 N. Central Expressway  
 Dallas, TX  
 MAP IT

Also, with your ticket purchase, Pearl Jam will include a free digital download of a full concert bootleg from a select show on the 2013 North American Tour.



**Spike Event**

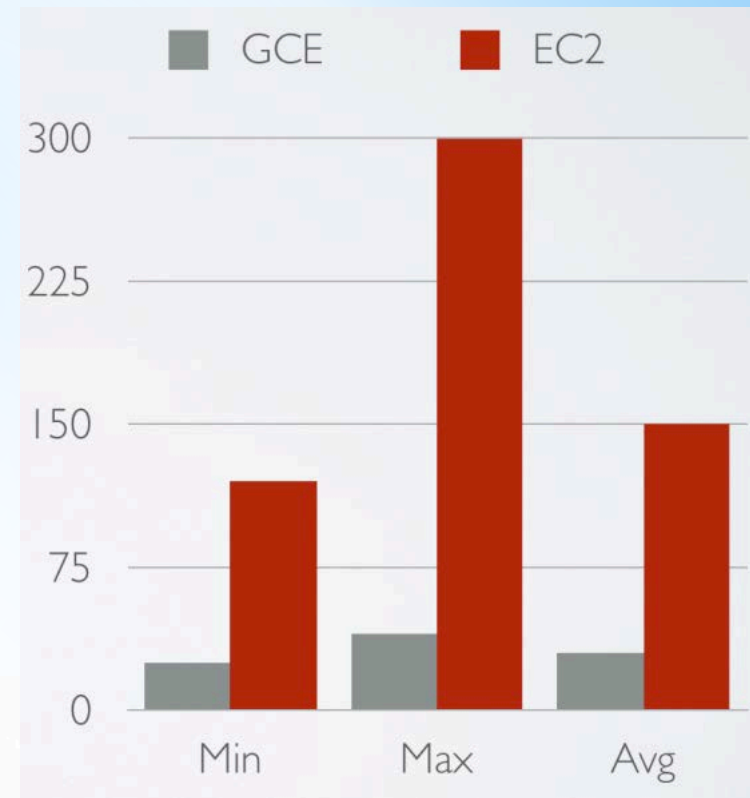
11/10/2014



\* Linux boot latency results in lost revenue

\* Cloud billing unfairly pads charges long after the spike is over.

- \* Faster booting nodes - see GCE
- \* Sub hour billing
  - \* Google GCE (10 min)
  - \* MS Azure (1 min)



# Google Compute Engine

Compute Engine is an infrastructure as a service that lets you run your large-scale computing workloads on Linux virtual machines hosted on Google's infrastructure.

Pay for what you use. Enjoy minute-level billing increments (with a 10 minute minimum charge) so you don't pay for compute minutes that you don't use.

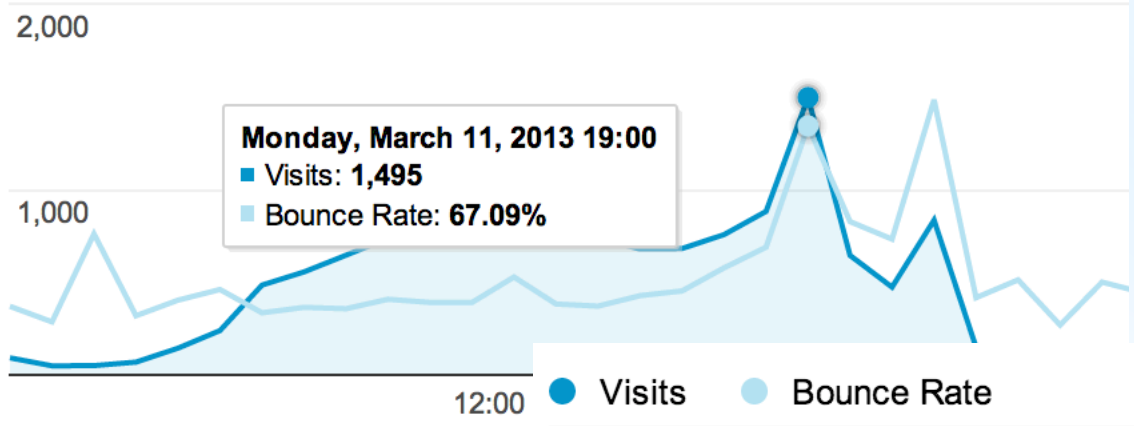
\* Options



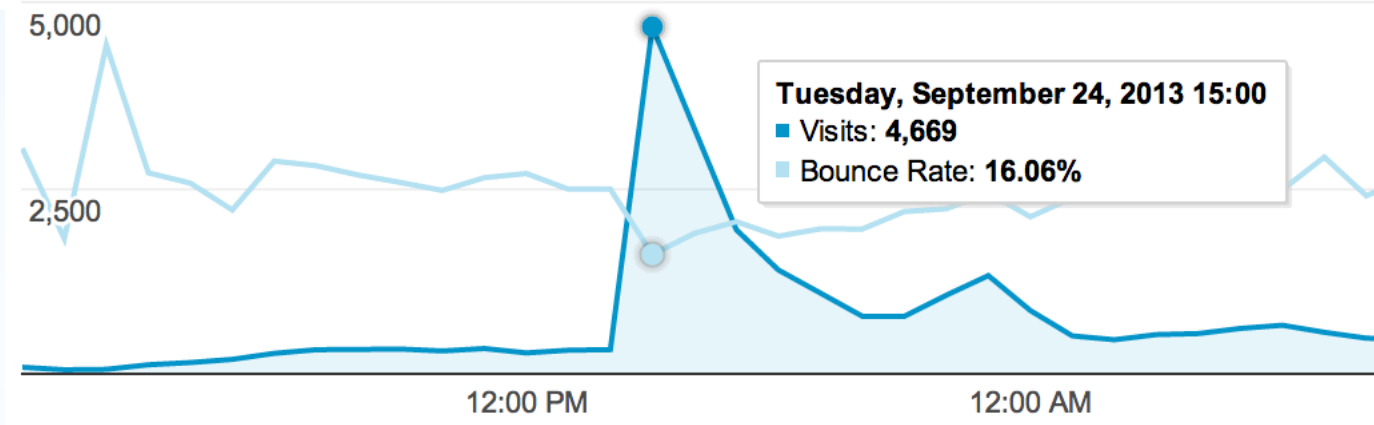
Windows Azure™



● Visits ● Bounce Rate



● Visits ● Bounce Rate



# \* Results

- \* Faster boots
- \* Sub-hour billing
  
- \* Also
  - \* Timely feedback metrics
  - \* User centric performance metrics
  - \* Load test (SOASTA)
  - \* Don't be afraid to compute ROI
    - \* Lost revenue
    - \* Recovered revenue



\* Conclusion