

BSD LICENSED

CloudI



A Cloud at the lowest level

Hack and Tell, Seattle Washington

October 9th 2013

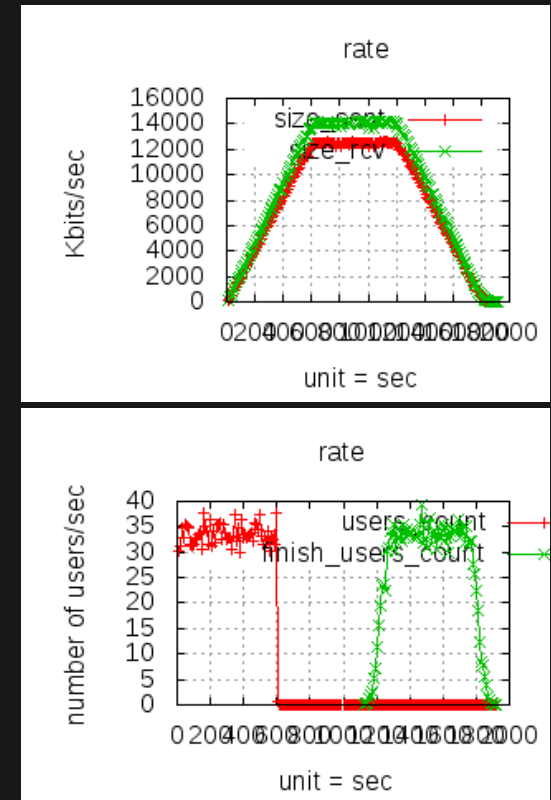
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Why do you want Cloud?

- Cloud computing without virtualization to maximize resource utilization with dependable performance
(Efficiency)
- Provide real-time fault-tolerance guarantees with a polygot service abstraction
(Fault-tolerance)
- Private deployment with natural scalability, e.g., making unscalable source code scale
(Scalability)

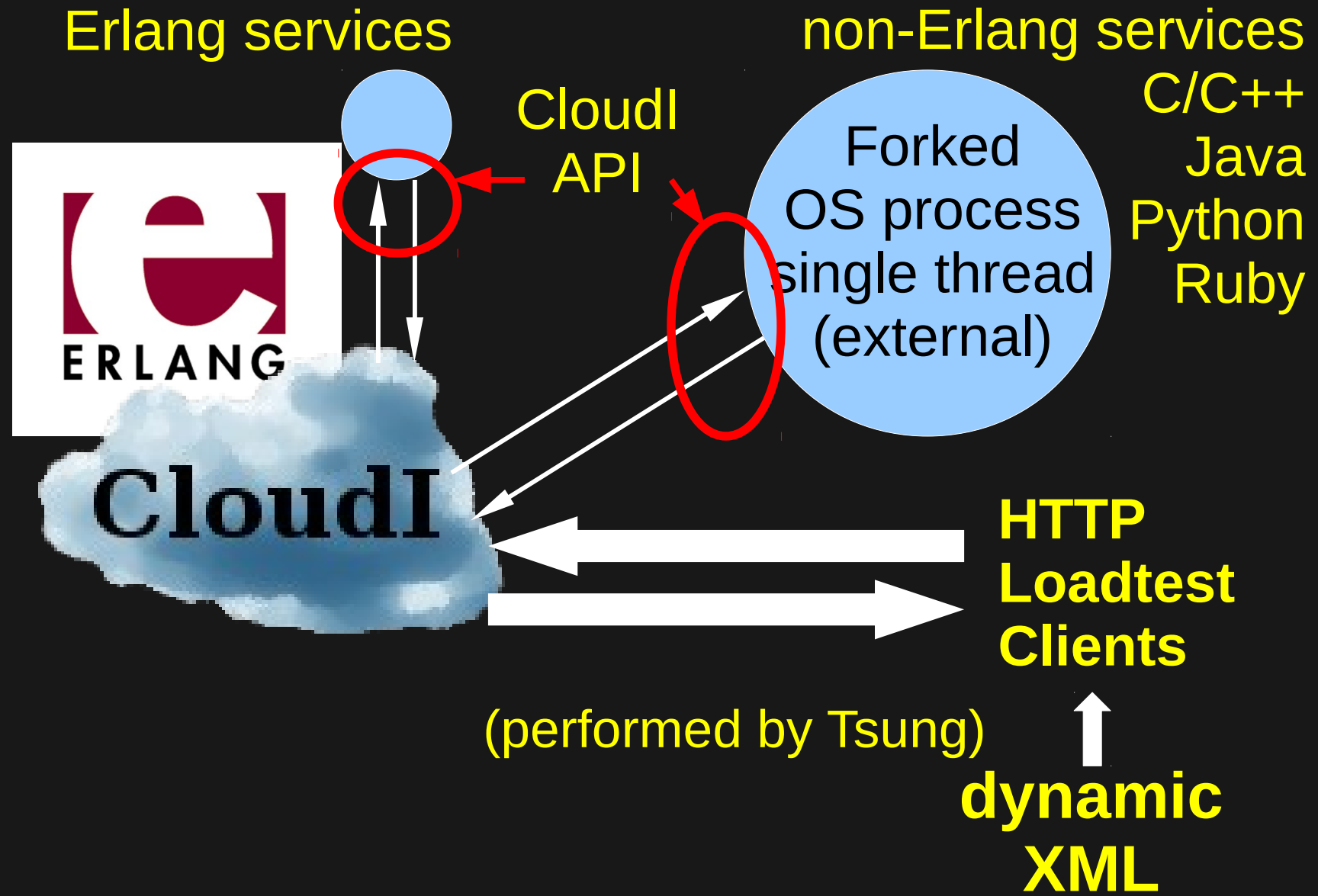
20k HTTP clients (10k req/sec peak)

- C/C++ 1 / 27 / 135
- Erlang 1 / 23 / 161
- Java 1 / 33 / 155
- PythonC 2 / 200 / 350
- Python 2 / 3200 / 3300
- Ruby 2 / 3500 / 3700



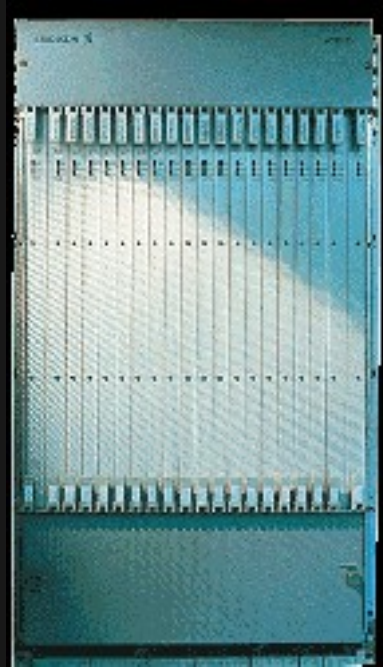
low/mean-max/max in milliseconds (during .5hr)
single process, single thread (worst case code)
2.9 to 3.7 GB max on 64bit (local proto v1.2.2)

Fault-tolerance with Erlang



Erlang

AXD 301 99.99999999% (9-9s) uptime



Scalability
+
Fault-tolerance

Scalability

- Erlang implements the Actor Model by providing concurrent Erlang processes and message passing
- The Erlang VM provides per-process garbage collection for real-time fault-tolerance!
- CloudI extends Erlang's Actor Model implementation to other programming languages, using a service abstraction (SOA, services that use the CloudI API)



Thanks :-)

version 1.3.0 release by October 21st

More info at

<http://cloudi.org>

Questions?