



WOMBAT ORCHESTRATION - 10.000FT OVERVIEW -

a.k.a. ESL's contribution to RELEASE



Krakow
2013-10-04

WOMBATOAM

A tool for automating the deployment of distributed Erlang applications across multiple Cloud providers.

RELEASE (EU FP7 STREPS)

GOAL OF THE PROJECT

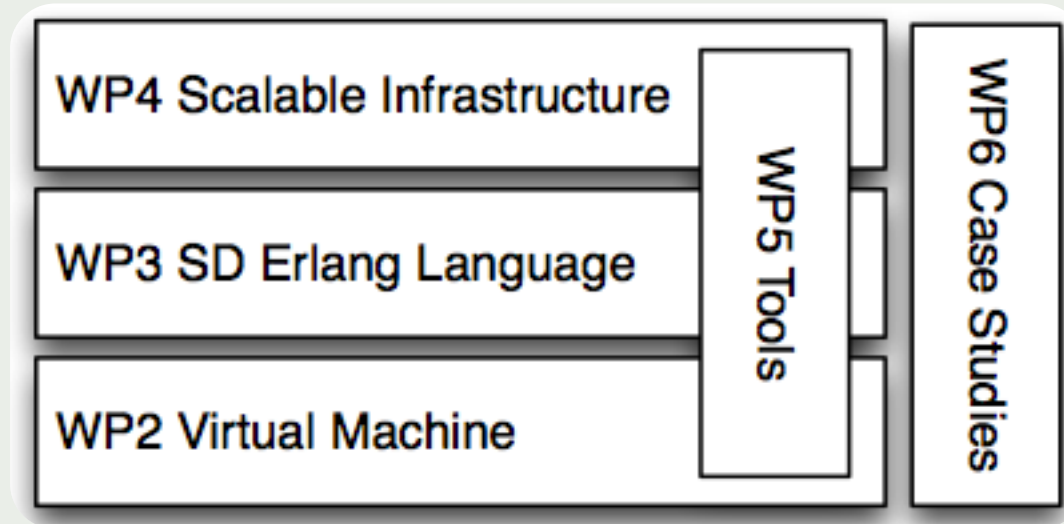
*To scale the radical **concurrency-oriented programming paradigm** to build reliable general-purpose software on **massively parallel** machines.*

RELEASE Statement of Aims, 2011

MULTI-CORE

DISTRIBUTED

WORK PACKAGE 4 (SCALABLE INFRASTRUCTURE)



*Developing a scalable **virtualization infrastructure** capable of creating, managing and **dynamically scaling** super-clusters of smaller **heterogeneous** clusters, based on **capability profile matching***

WOMBAT ORCHESTRATION

HETEROGENEOUS DEPLOYMENT



OpenNebula.org



cloudstack
open source cloud computing



Seamless deployment across multiple cloud providers

Erlang
SOLUTIONS

SEMI-EXPLICIT DEPLOYMENT

Match deployment demands against the capabilities of the available deployment domains

- Co-location of nodes
- Geographical constraints
- Load balancing across infrastructure providers
- Infrastructure provider consolidation

DYNAMIC SCALING

Backed by inter-/intra-family **bootstrap** strategies

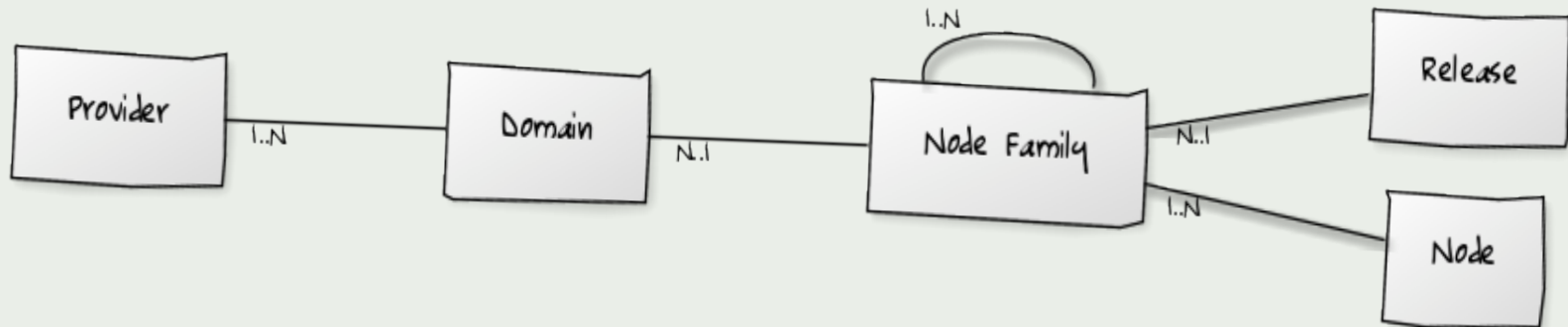
→ Bootstrap **node(s) selection** strategy

none / random / {node, NodeUUID} / all / ...

→ **Action**

distributed_erlang / custom / ...

EASY TO USE



- ~> Register infrastructure providers
- ~> Upload Erlang releases
- ~> Create node families
- ~> Define intra/inter-family bootstrapping strategies
- ~> *Spawn new nodes within a node family*
- ~> *Manage existing nodes (e.g., start, stop, ...)*

ROADMAP

- Semi-explicit deployment strategies
- 1-click service deployment
- Built-in support for SD Erlang
- Web-based GUI
- More complex case studies (Riak too simple)
- Auto-scaling (integration with Wombat's monitoring)

THANKS!