

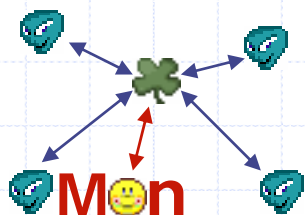
# AMon

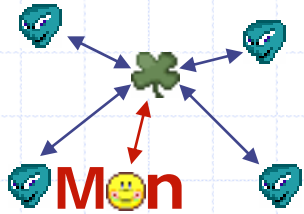
## AliEn services **M**onitoring and control framework

October 2006

Catalin Cirstoiu

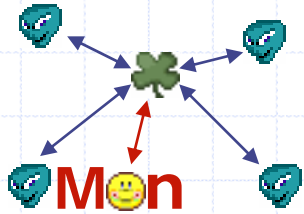
UPB/CERN (ARDA Group)





# Contents

- ◆ Motivation
- ◆ What is Jabber
- ◆ Perl approach
- ◆ AMon structure
- ◆ Use-cases
- ◆ Conclusion

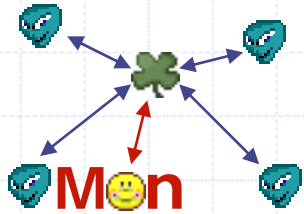


# Motivation

- ◆ **Administrating distributed services is tedious**
  - Restart crashed services
  - Update installations
  - Check log files for errors
- ◆ **Decisions cannot be taken based only on local information**
- ◆ **Firewall problems in inter-site services communication**

**solution:**

- ◆ **A messaging framework with monitoring and controlling capabilities on the existing services**



# What is Jabber

## ◆ Jabber is a set of open technologies for streaming XML between two clients

- Open XML protocols for IM, presence etc.
- Many open-source implementations
- Peer to peer server network

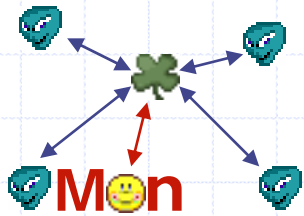
## ◆ Distributed architecture

- Clients connect to servers
- Direct connections between servers
- Domain-based routing, similar to email
- All entities have presence – availability information
- Connections are stateful



Speed test: ejabberd+2 perl clients:

- 100 round trip msg/sec for 100B body
- 50 round trip msg/sec for 10KB body



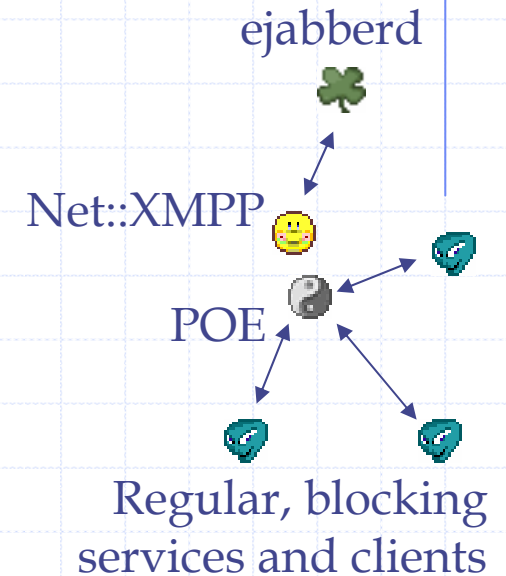
# Perl approach

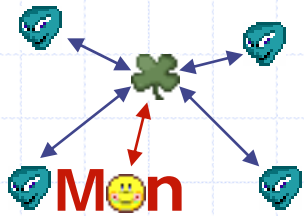
## ◆ Net::XMPP

- Standard Jabber implementation in Perl
- Supports (a)synchronous messages
- Supports 'chat rooms' – msg. broadcast
- Supports presence information

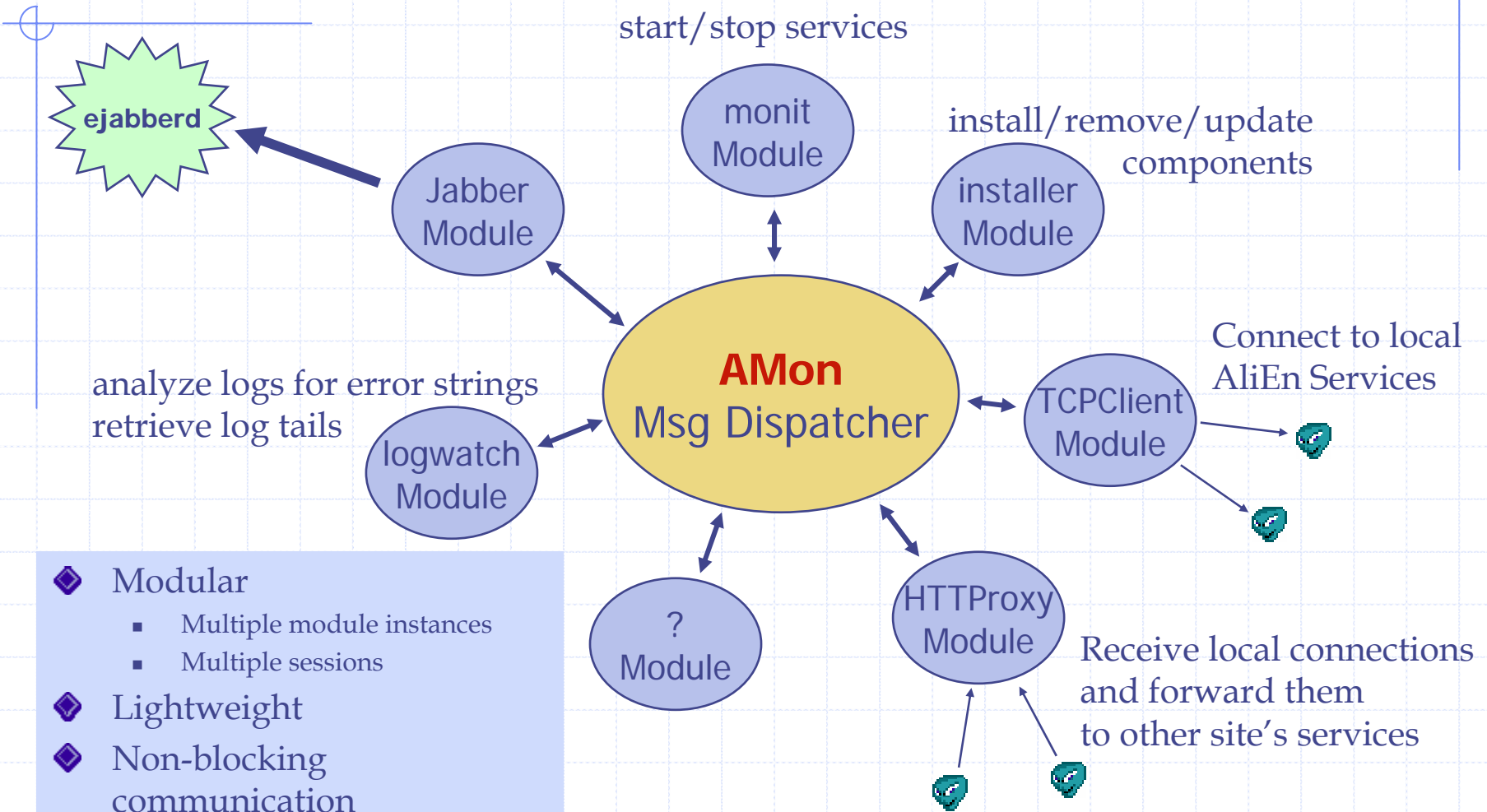
## ◆ Perl Object Environment (POE)

- Framework for event driven Perl cooperative multitasking programs
- Non-blocking I/O for child processes, GUI interfaces, tcp servers and clients
- Lots of components are already available (asynch non-blocking DB calls)

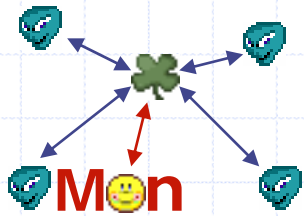




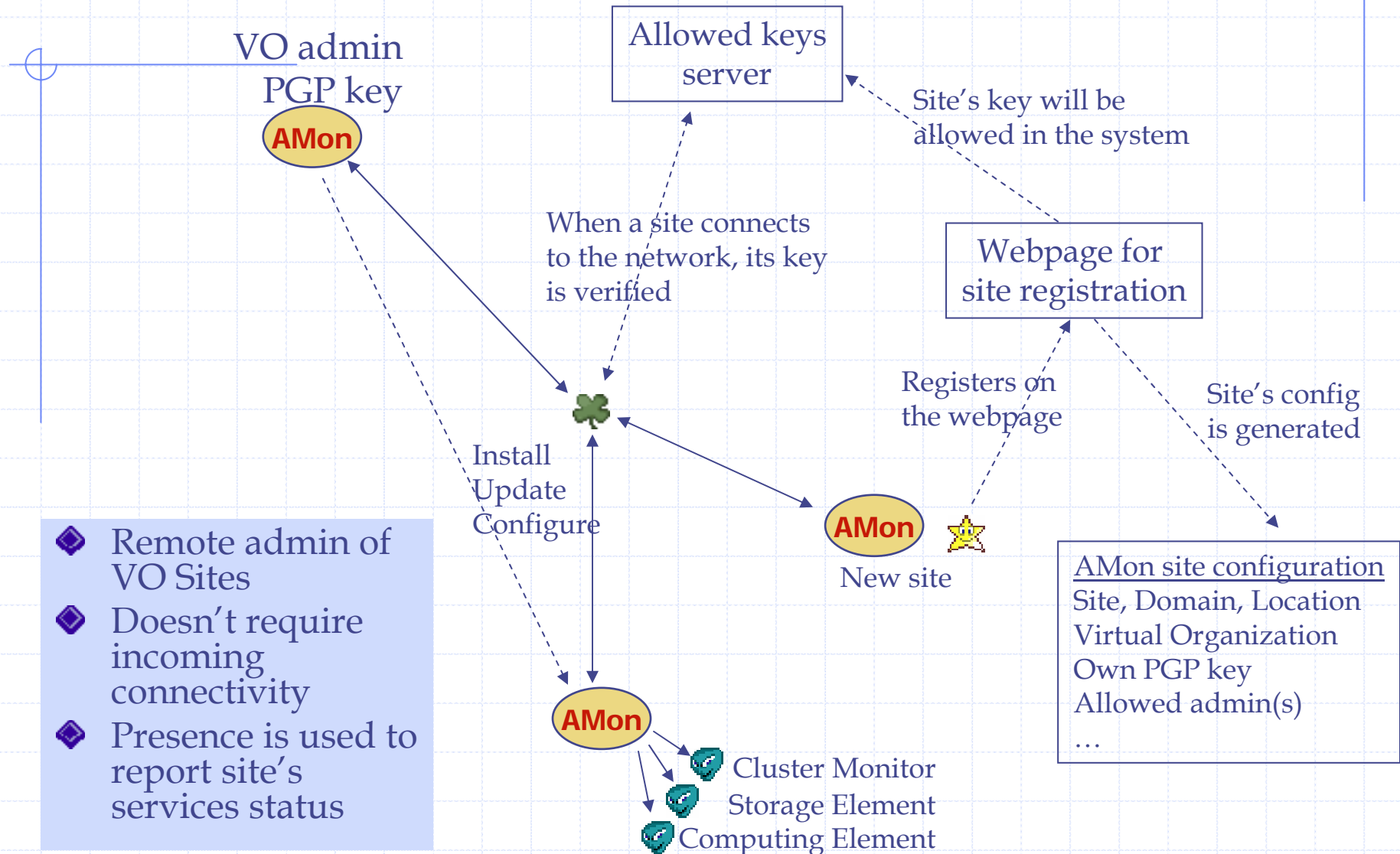
# AMon Service



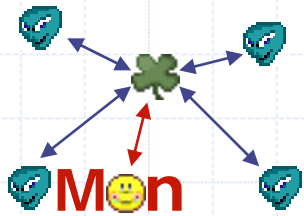
- ◆ Modular
  - Multiple module instances
  - Multiple sessions
- ◆ Lightweight
- ◆ Non-blocking communication



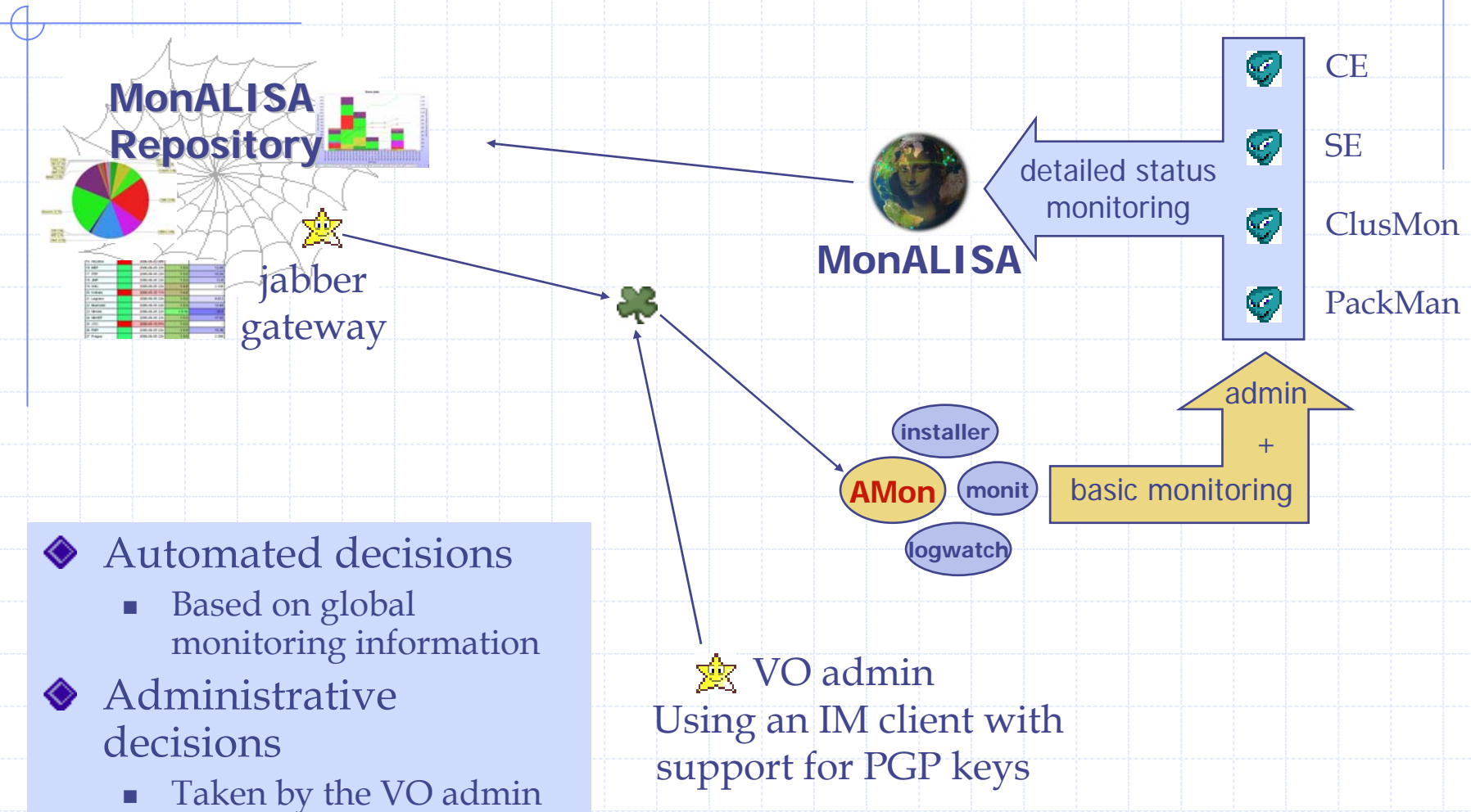
# AliEn Site Admin



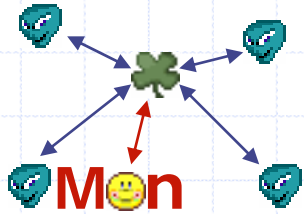
- ◆ Remote admin of VO Sites
- ◆ Doesn't require incoming connectivity
- ◆ Presence is used to report site's services status



# AliEn Services Admin







# Summary

- ◆ AMon – remote control tool for the VO Admin
  - Simplify AliEn administration on remote sites (services, updates)
  - Offer debug information – simple access to services logs
  - Provide transport for inter-site AliEn services communication

based on:

- ◆ Jabber - an open set of messaging technologies; efficient; with several free available implementations
- ◆ We can do efficient non-blocking, event-driven, cooperative multi-tasking programs in Perl