



CWG10

Control, Configuration and Monitoring

17 June 2014

ALICE O² Asian Workshop 2014



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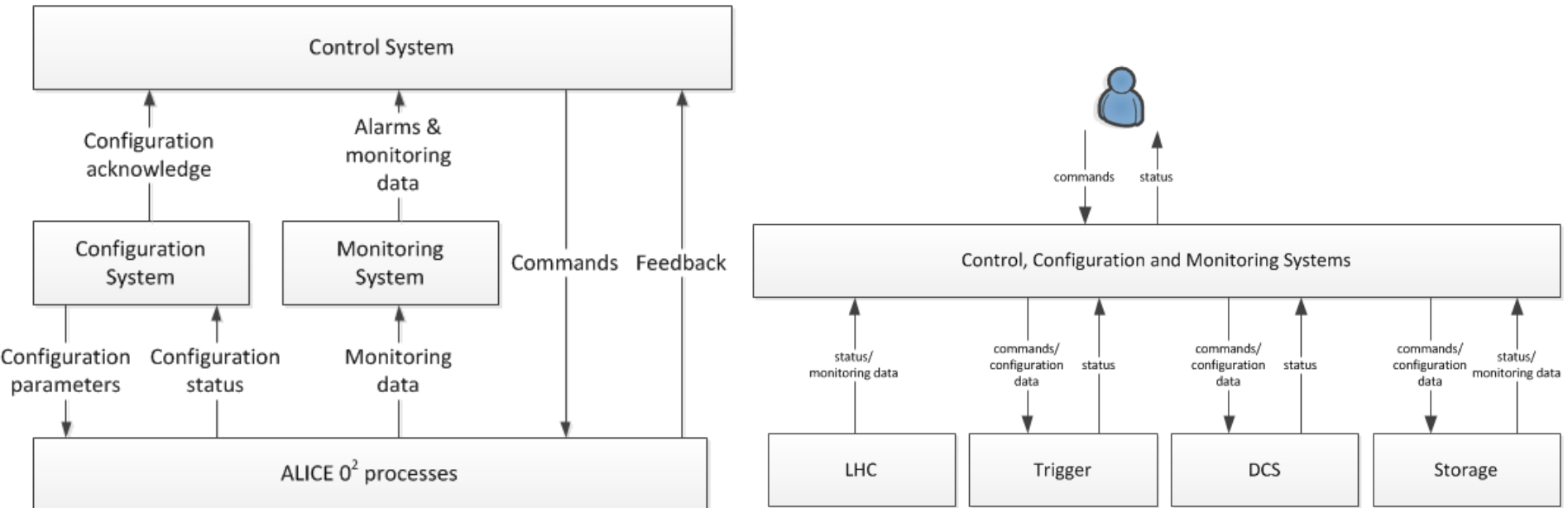
Motivation

- ▶ Why do we need a Control System ?
 - ▶ Start and stop processes
 - ▶ Sequence of operations, synchronization
 - ▶ External systems
 - ▶ Automation
- ▶ Why do we need a Configuration System ?
 - ▶ Configure processes
- ▶ Why do we need a Monitoring System ?
 - ▶ Detect abnormal conditions
 - ▶ Automation



Overview

► Control, Configuration and Monitoring (CCM)





CCM System Functions

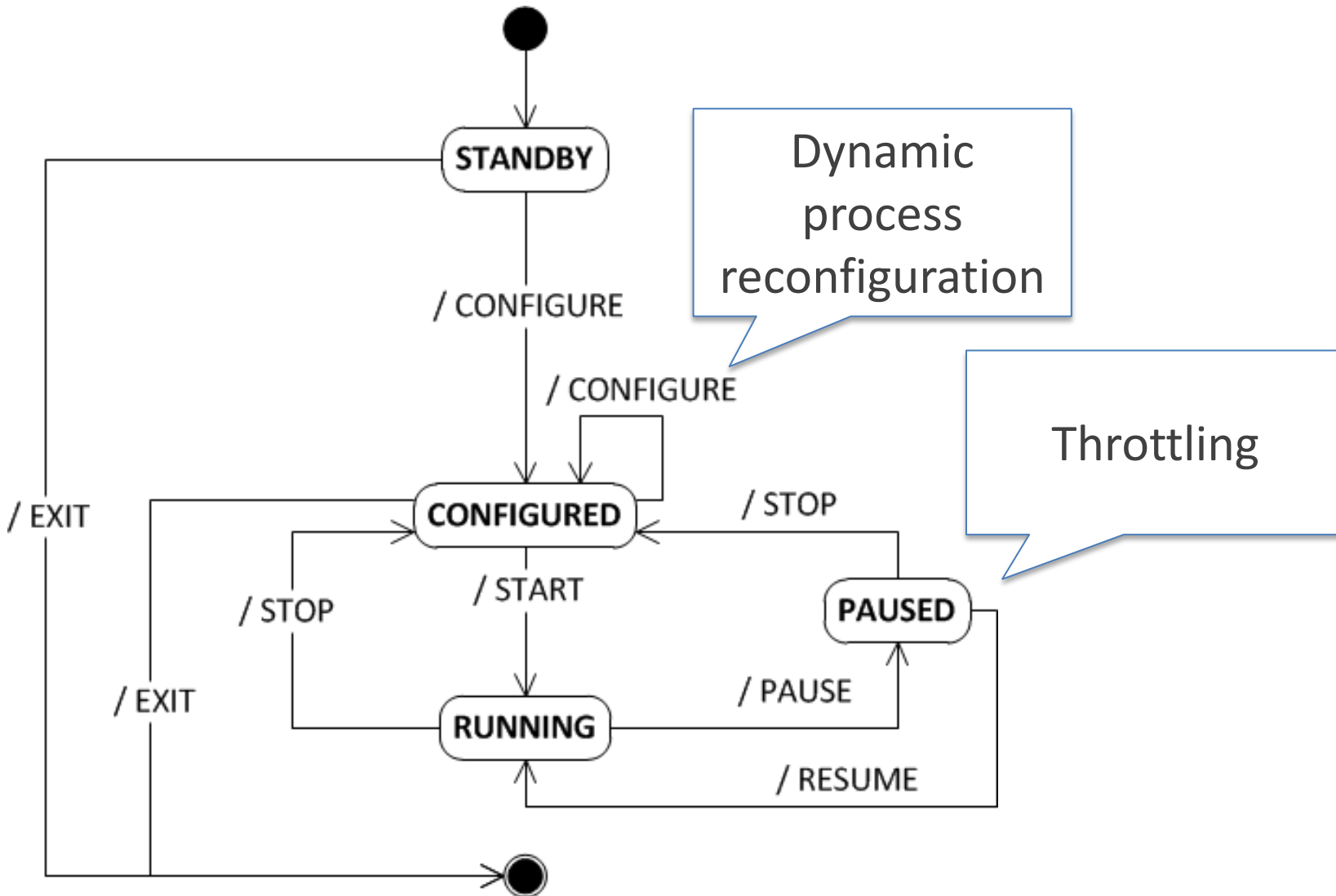
- ▶ **Control**
 - ▶ Process Management
 - ▶ Task Management
 - ▶ Automation

- ▶ **Configuration**
 - ▶ Configuration distribution
 - ▶ Dynamic process reconfiguration
 - ▶ Software installation

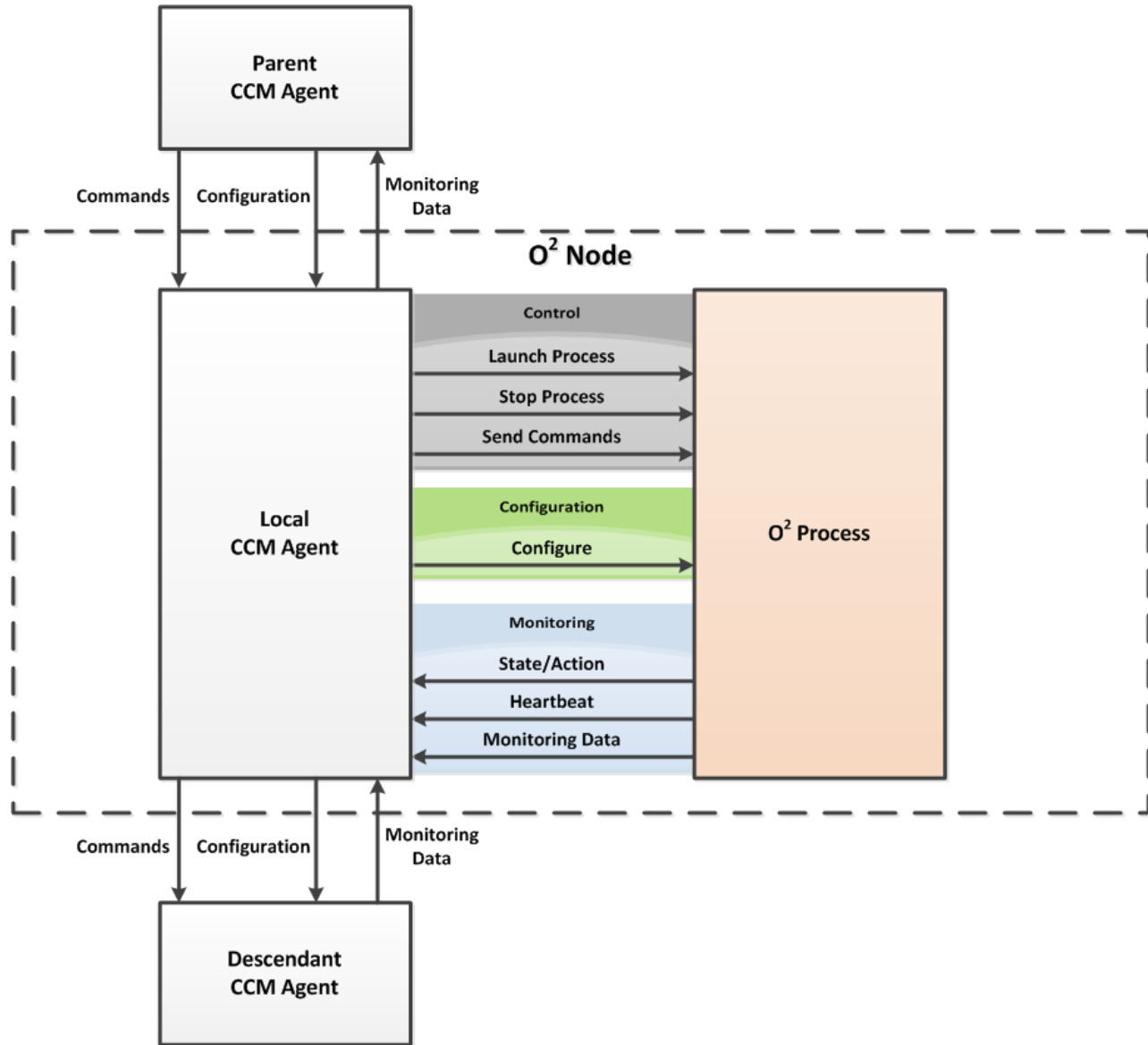
- ▶ **Monitoring**
 - ▶ Data collection and archival
 - ▶ Alarms and action triggering



Process base state machine

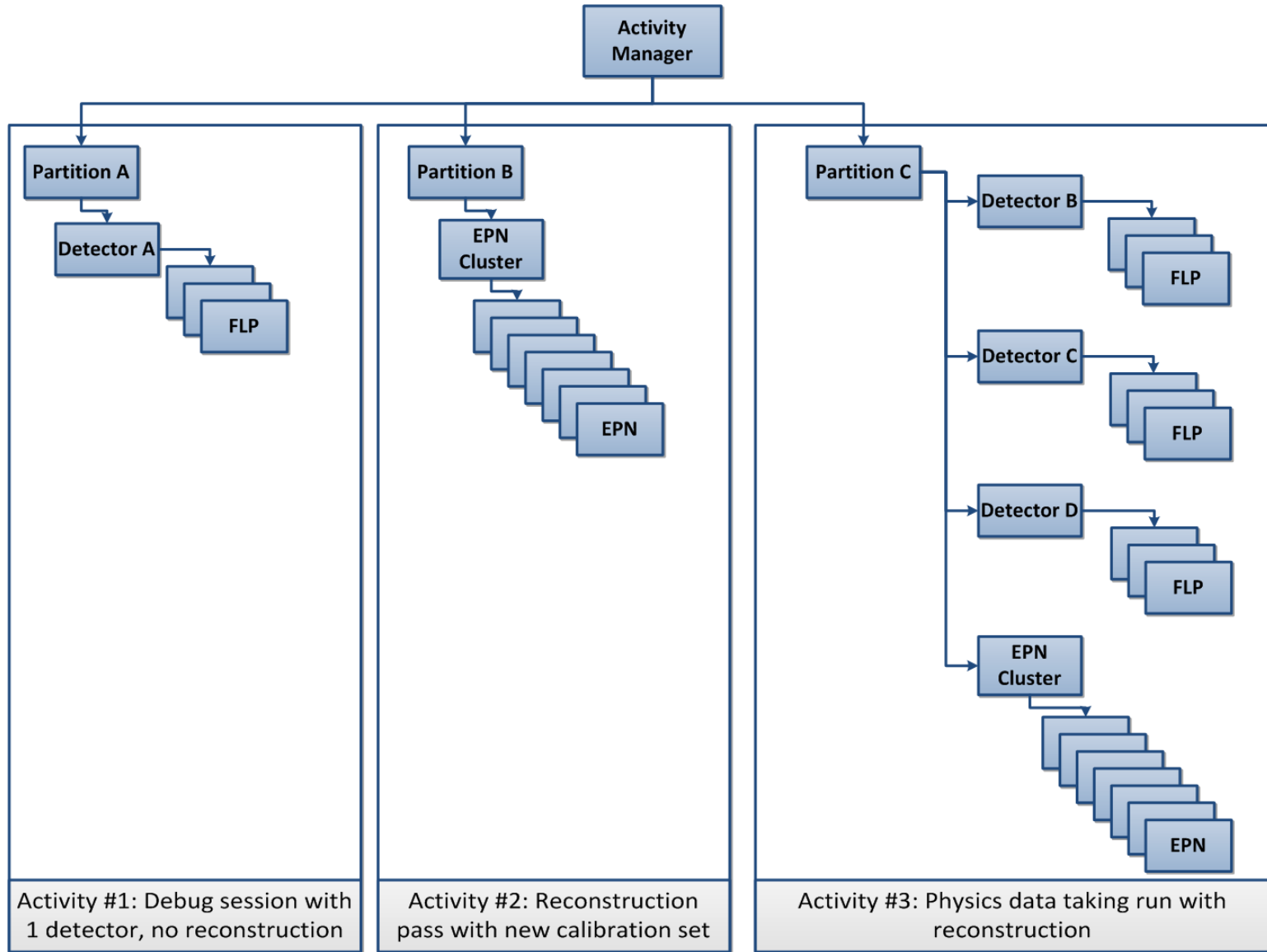


CCM Agents





Roles Hierarchy





Current Status

- ▶ System functions defined
- ▶ System architecture defined
- ▶ Starting prototyping to ensure that performance requirements can be fulfilled
 - ▶ Control
 - ▶ 140K commands and 400K state transitions
 - ▶ Configuration
 - ▶ 700 MB of configuration data
 - ▶ Monitoring
 - ▶ 600 KHz of monitoring data



Work Plan

- ▶ Control
 - ▶ Test ZeroMQ and SMI
- ▶ Monitoring
 - ▶ Test Zabbix and MonALISA
- ▶ Configuration
 - ▶ Waiting for meeting with FAIR team
 - ▶ Tools: Puppet, ZeroMQ, ZooKeeper, ...



Possible collaboration topics

- ▶ Configuration
 - ▶ Previous CWG10 members in charge of configuration left the collaboration

- ▶ Technology Surveys
 - ▶ For TDR or for future work