!CHAOS Metadata Server
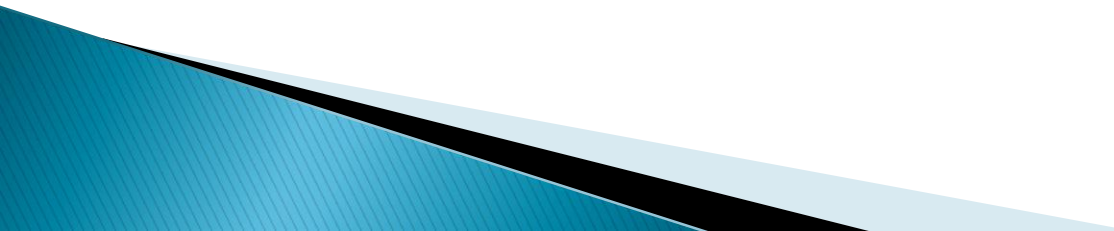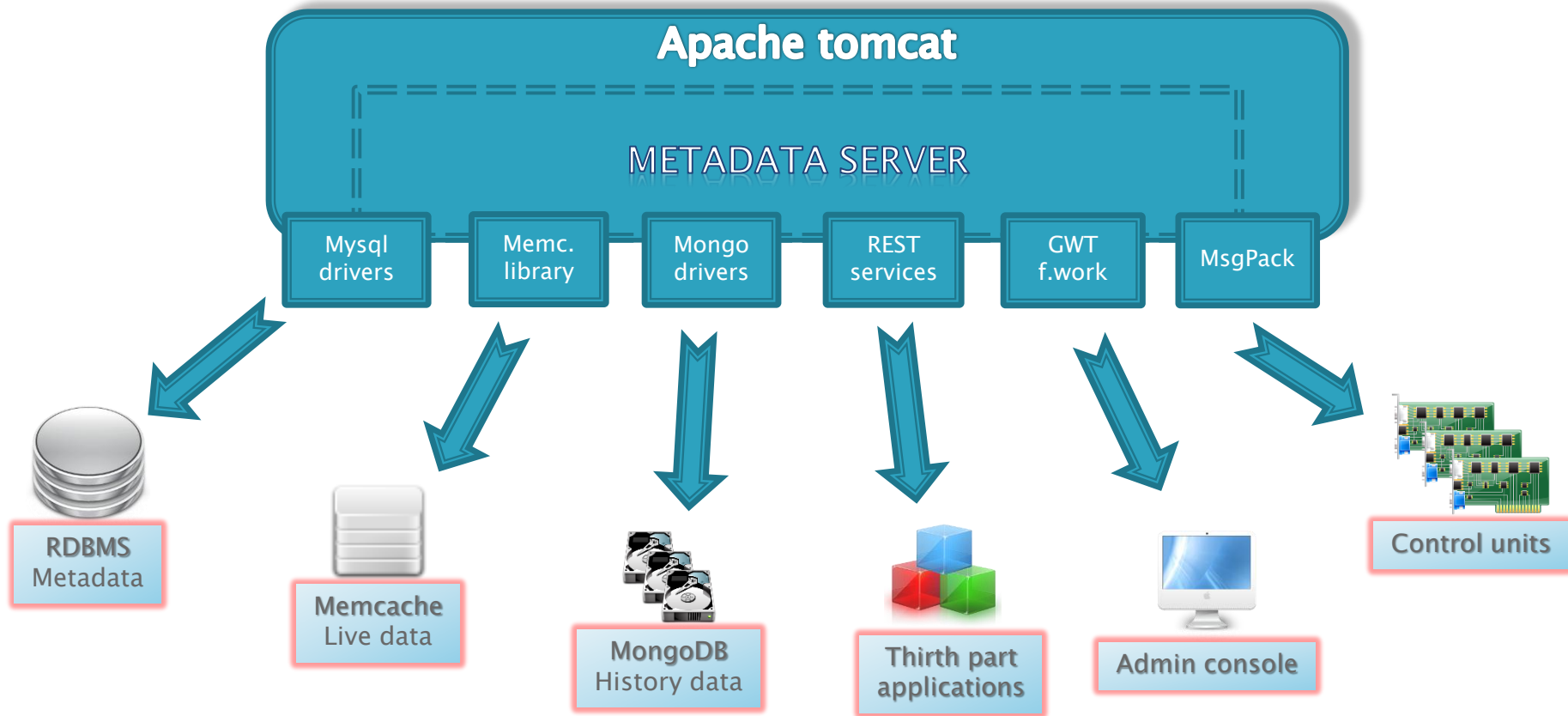
Federico Zani – INFN Roma2
federico.zani@roma2.infn.it
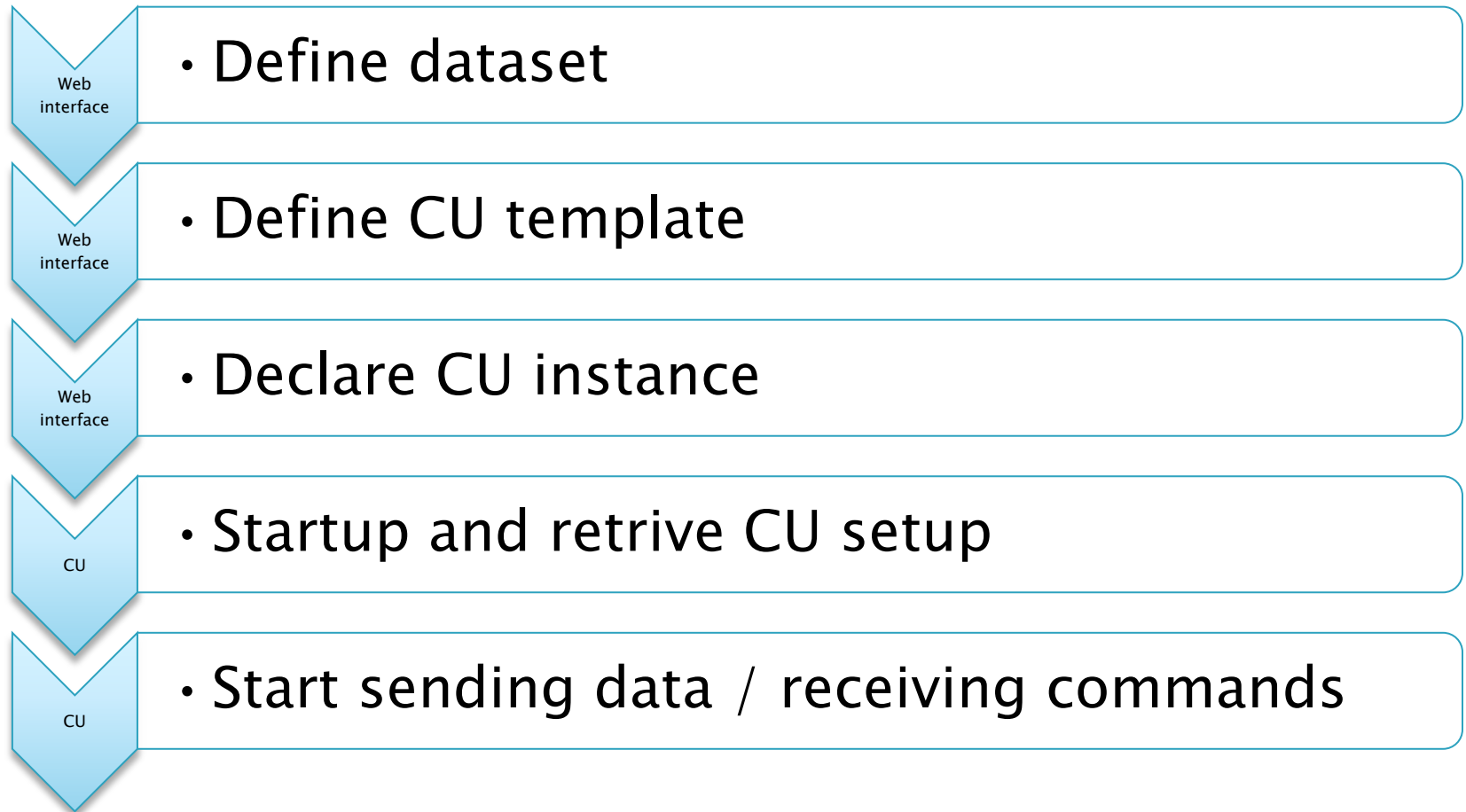
Tasks

- Manage datasets

- Store CU templates configurations

- Keep track of CU instantiations

- Orchestrate !CHAOS components

- Live overview of the !CHAOS infrastructure

Architecture

Apache tomcat

METADATA SERVER

| Mysql drivers | Memc. library | Mongo drivers | REST services | GWT f.work | MsgPack |

RDBMS
Metadata

Memcache
Live data

MongoDB
History data

Thirth part applications

Admin console

Control units

CU setup process

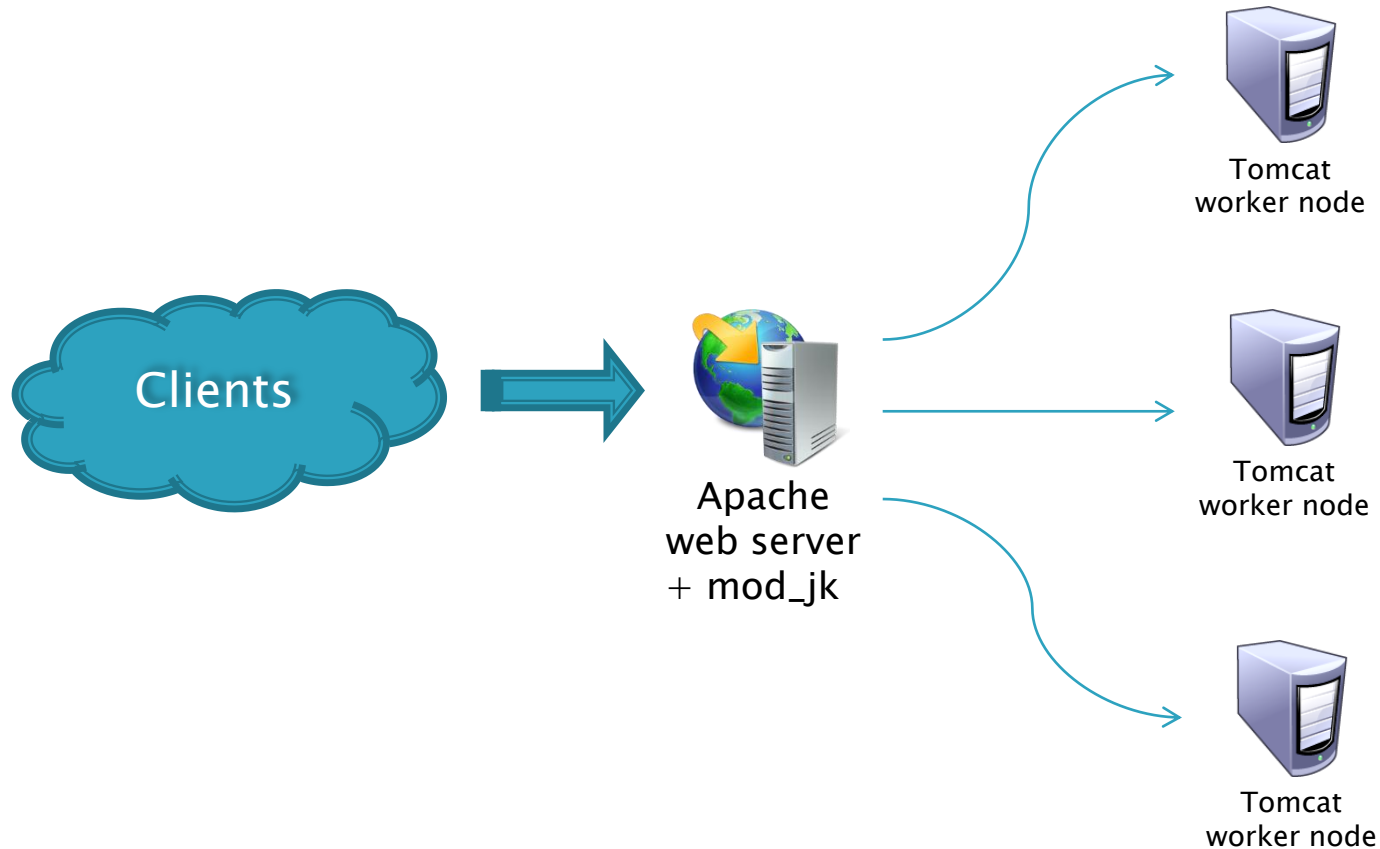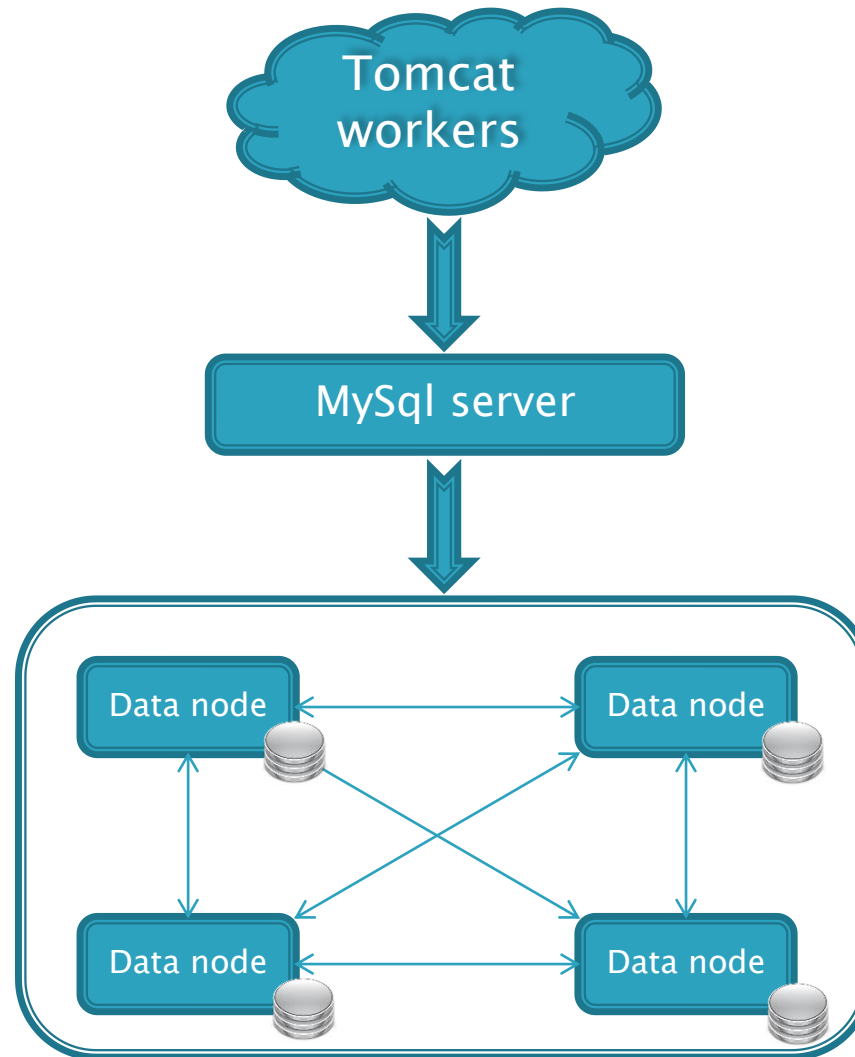|	
Web interface	• Define dataset
Web interface	• Define CU template
Web interface	• Declare CU instance
CU	• Startup and retrive CU setup
CU	• Start sending data / receiving commands

HA and scalability

Key factors

- Use standard technologies…
  - ..that use standards interfaces to comunicate
  - ..that already offer HA/clustering out-of-the-box
- Stateless interaction between components
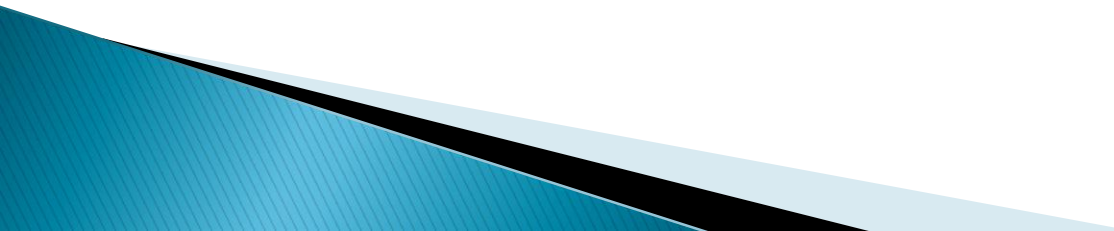- Avoid (as much as possible) single point of failure

Tomcat scalability

MySql clustering

Tomcat workers

MySql server

Data node

Data node

Data node

Data node

Next milestones

(in priority order)

▸ DB schema definition

▸ Web interface (GWT) for managing datasets/CU

▸ Basic RPC protocol for CU comunication

▸ Global monitoring system

▸ REST services for third part development

Comunity contributions

We are studying the best ways to let comunity contribute !CHAOS project, at the moment Metadata Server open tasks are

Scalability (tomcat, mysql, apache)

Interface (GWT expertice in CRUD application)

Ajax widgets for GWT application

…more to come… ☺