Elasticsearch and Kibana Setup
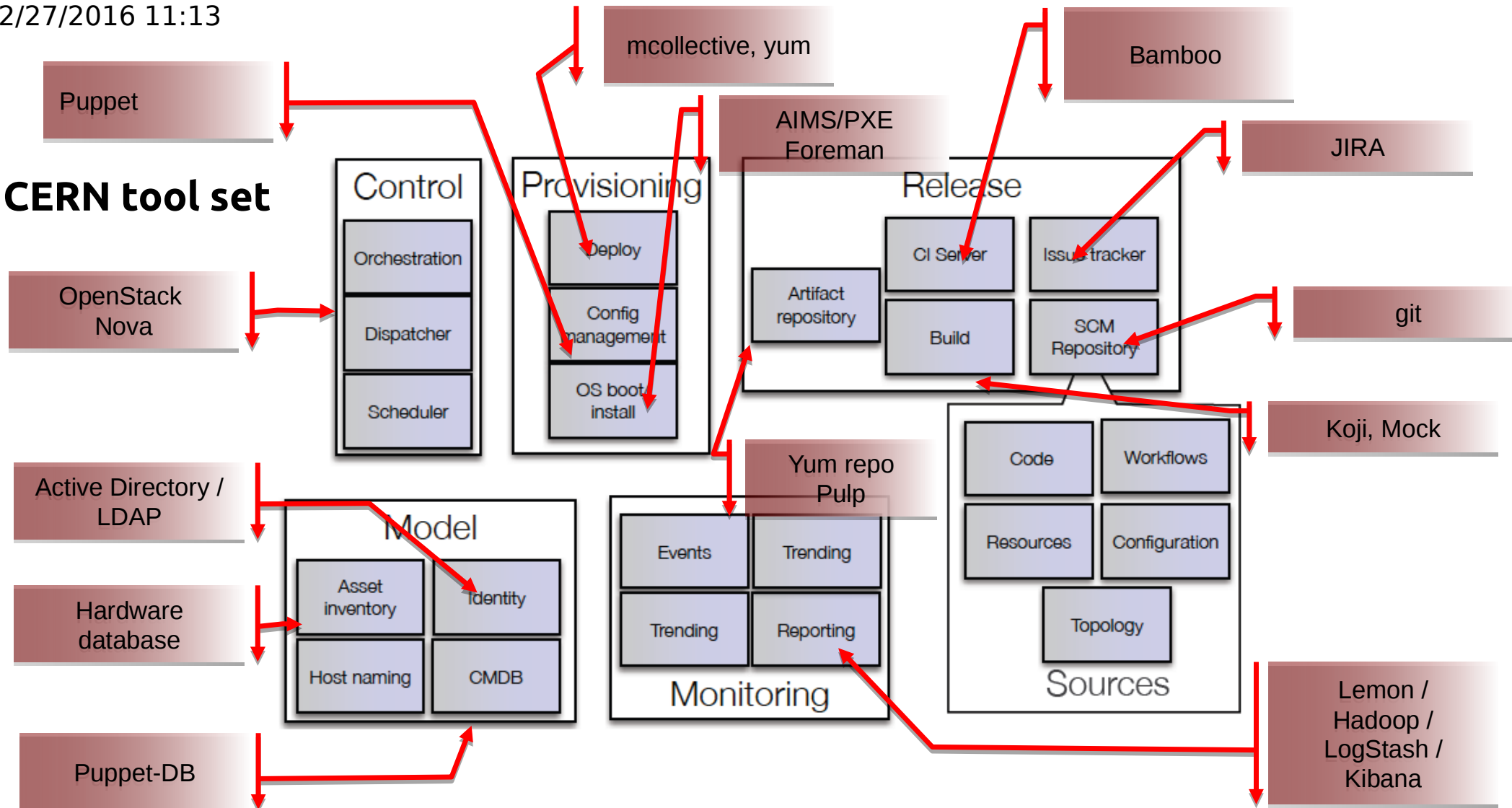
CMS Offline Software Group

Ijaz Ahmad

Issues with previous setup
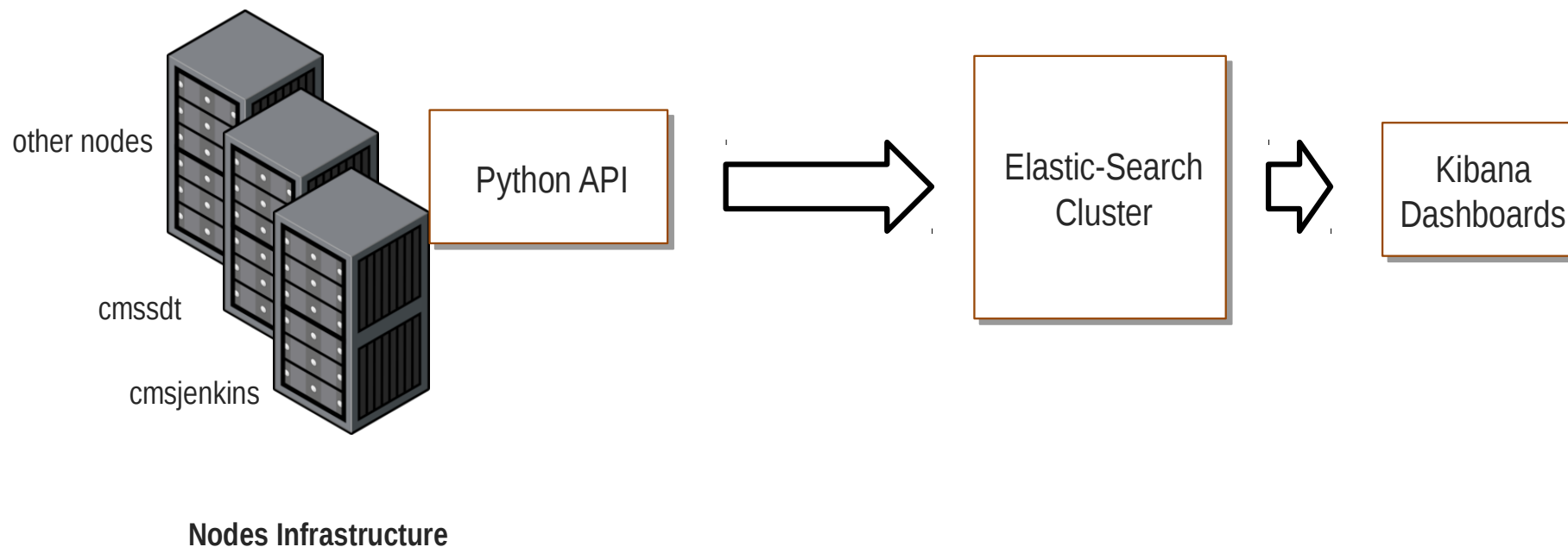
- Shared resources
- Memory and CPU problems
- Slow down of slave nodes

CERN tool set

mcollective, yum

Bamboo

Puppet

AIMS/PXE
Foreman

JIRA

Control

Orchestration

Dispatcher

Scheduler

Provisioning

Deploy

Config
management

OS boot
install

Release

CI Server

Issue tracker

Artifact
repository

Build

SCM
Repository

OpenStack
Nova

git

Koji, Mock

Active Directory /
LDAP

Model

Asset
inventory

Identity

Host naming

CMDB

Yum repo
Pulp

Monitoring

Events

Trending

Trending

Reporting

Sources

Code

Workflows

Resources

Configuration

Topology

Hardware
database

Puppet-DB

Lemon /
Hadoop /
LogStash /
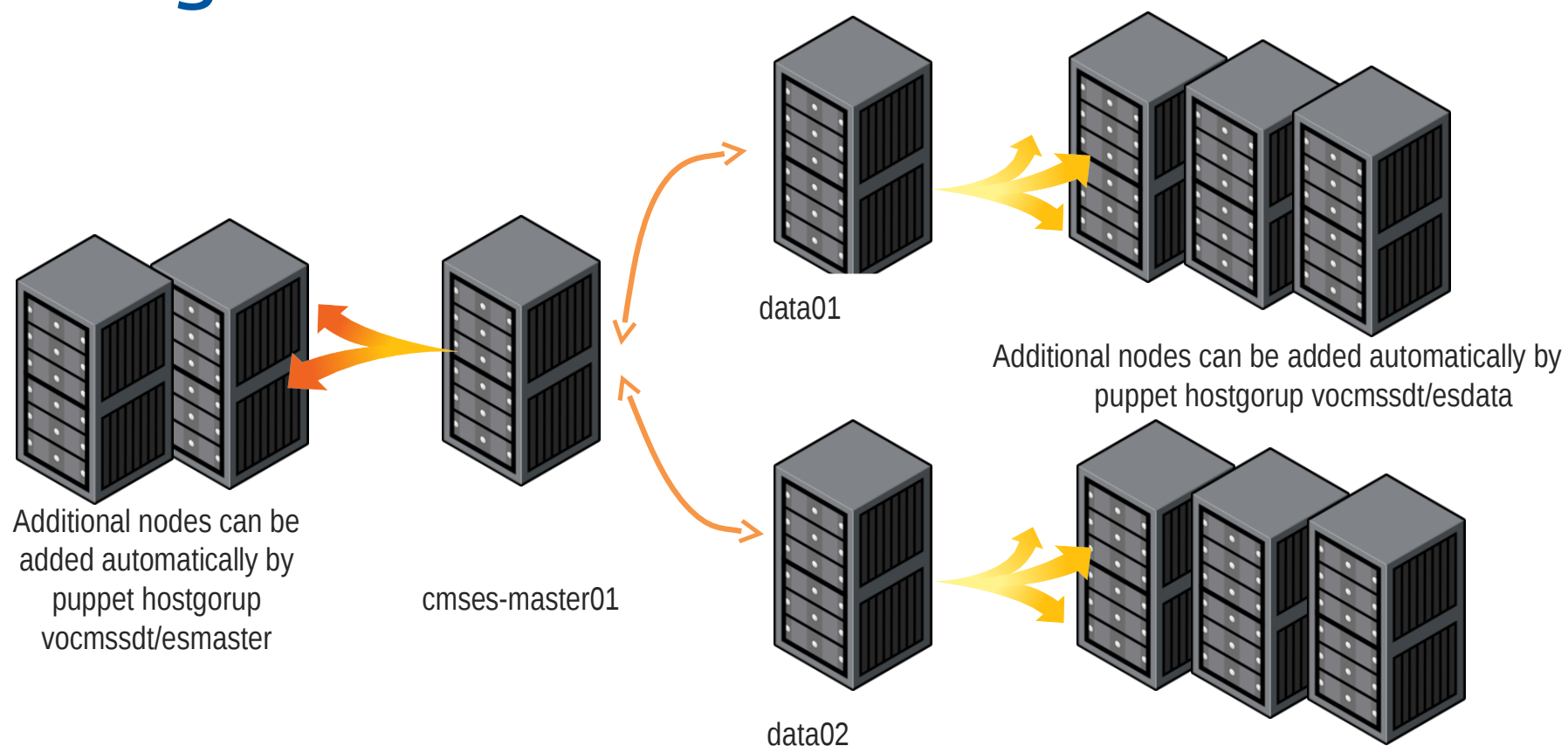Kibana

CERN

Tools used

- Current setup: 3 nodes
- Can scale horizontally
- Tool chain using
  - Elastic-search 1.5 , Kibana3
  - SearchGuard
  - Puppet-Foreman
  - GitHub (cms-bot)
  - CERN Git (puppet repos)
  - Python

Monitoring - Python, Elastic Search, Kibana

other nodes

cmssdt

cmsjenkins

Nodes Infrastructure

Python API

Elastic-Search Cluster

Kibana Dashboards

Scaling Architecture Overview

data01

Additional nodes can be added automatically by
puppet hostgorup vocmssdt/esdata

Additional nodes can be
added automatically by
puppet hostgorup
vocmssdt/esmaster

cmses-master01

data02

Services

- Monitoring various aspects of Jenkins such as builds
- RelVal logs errors
- Github pull requests
- More ..

Elastic-Search – Cluster Manager

Demo

http://cmses-master01.cern.ch:9200/_plugin/HQ

Monitoring - Kibana

Demo

http://cmses-master01.cern.ch:9200/_plugin/kibana