



# Elasticsearch and Kibana Setup

CMS Offline Software Group

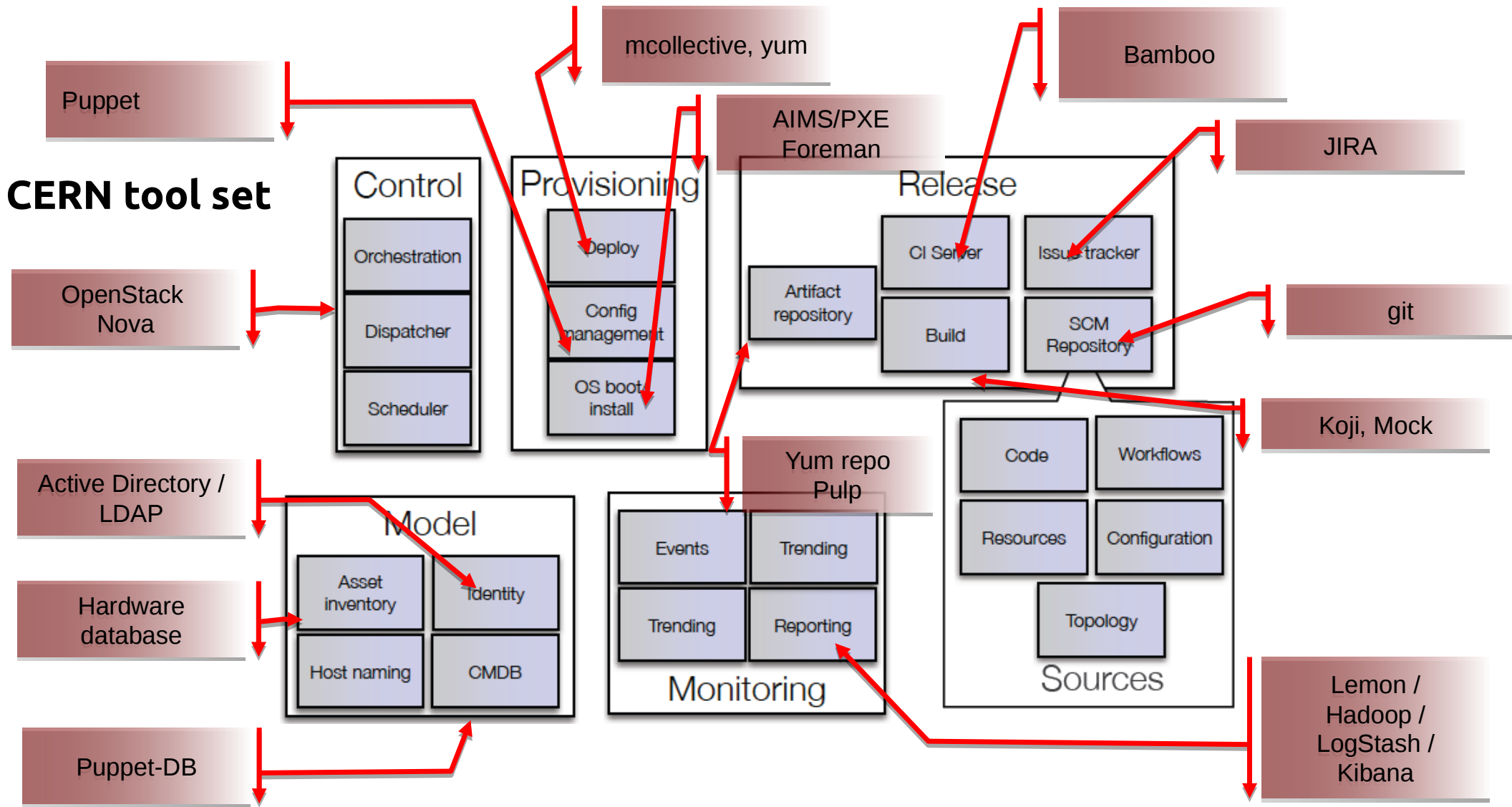
Ijaz Ahmad



# Issues with previous setup

- Shared resources
- Memory and CPU problems
- Slow down of slave nodes

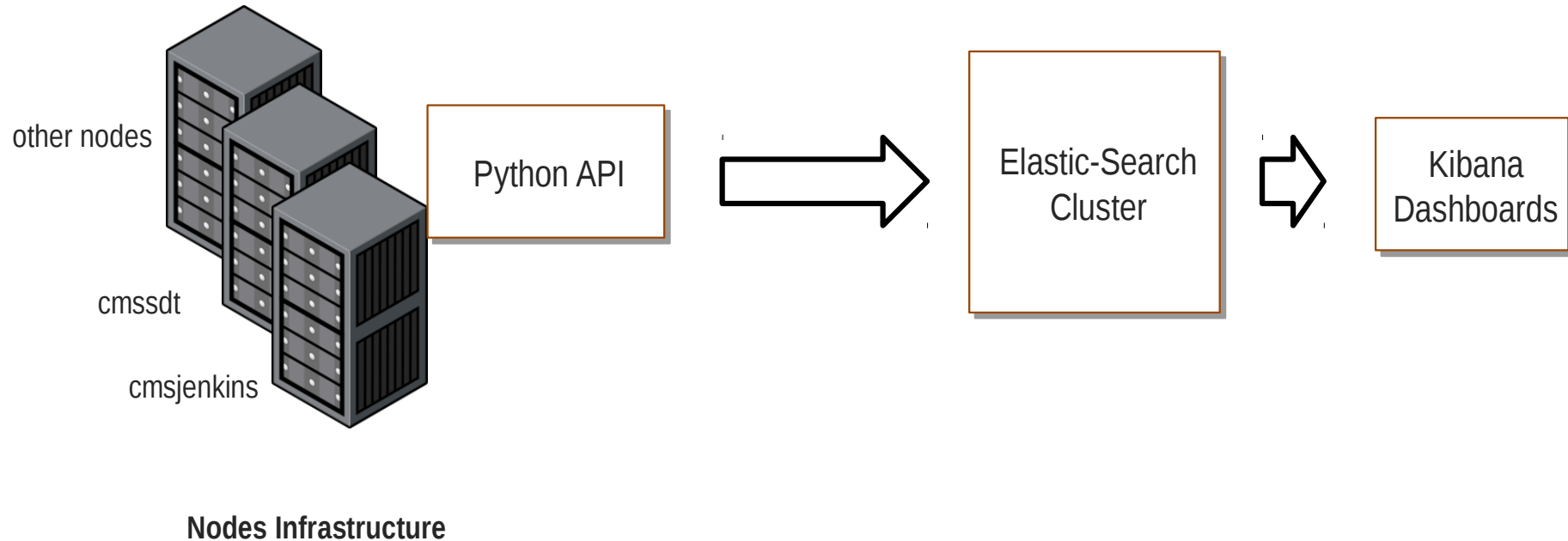
# CERN tool set



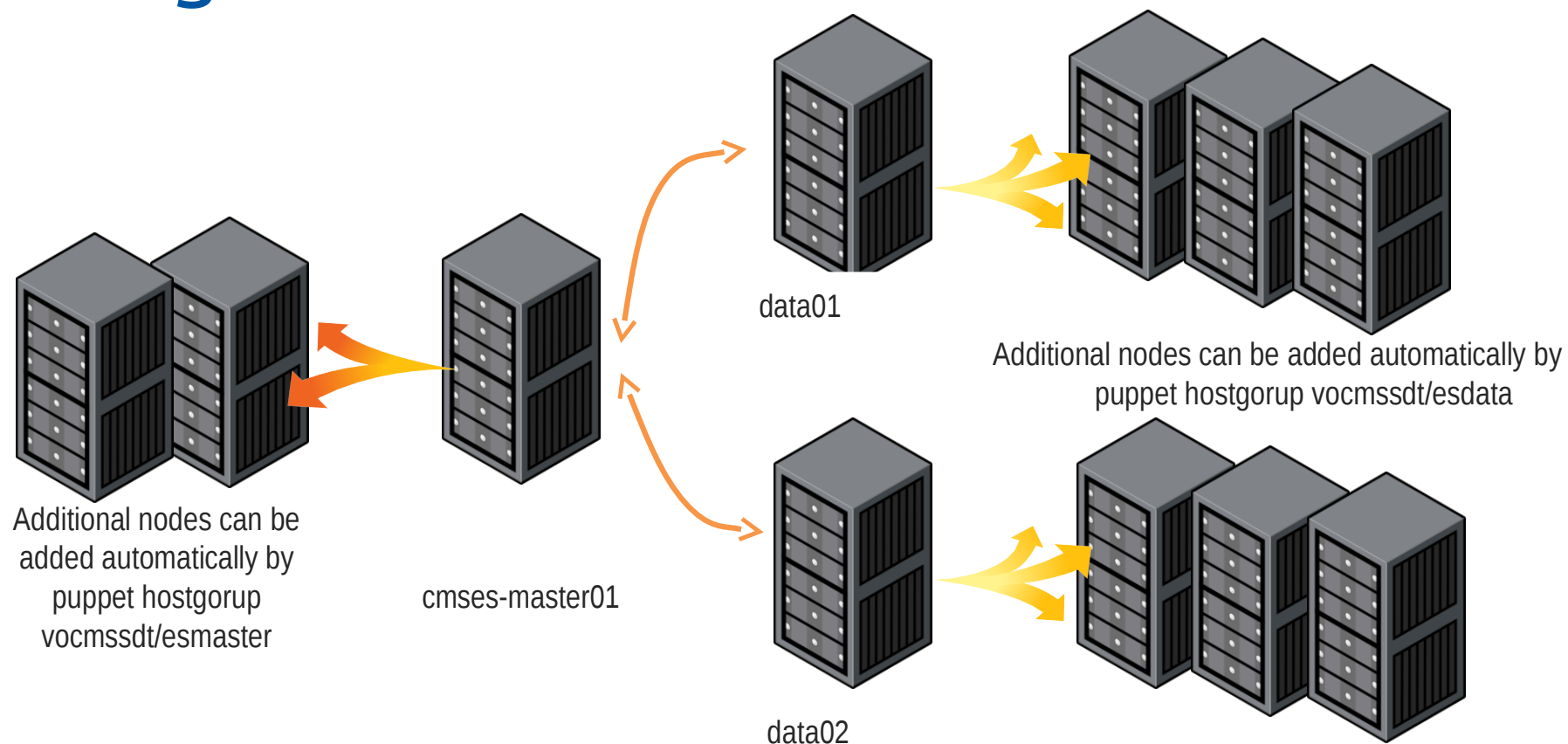
# Tools used

- 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



# Scaling Architecture Overview



# Services

- Monitoring various aspects of Jenkins such as builds
- RelVal logs errors
- Next to come...
  - ♦ Github pull requests
  - ♦ Hypernews



# Elastic-Search – Cluster Manager

cmses-cluster

IndicesQueryMappingsREST

Node Diagnosticscmses-master01cmses-data01cmses-data02

10:24:43

Cluster Overview

Cluster Statistics

3  
Nodes

18  
Total Shards

18  
Successful Shards

6  
Indices

98,137  
Documents

2.1GB  
Size

Cluster Health

Status	Green
Timed Out?	false
# Nodes	3
# Data Nodes	2
Active Primary Shards	9
Active Shards	18

Indices

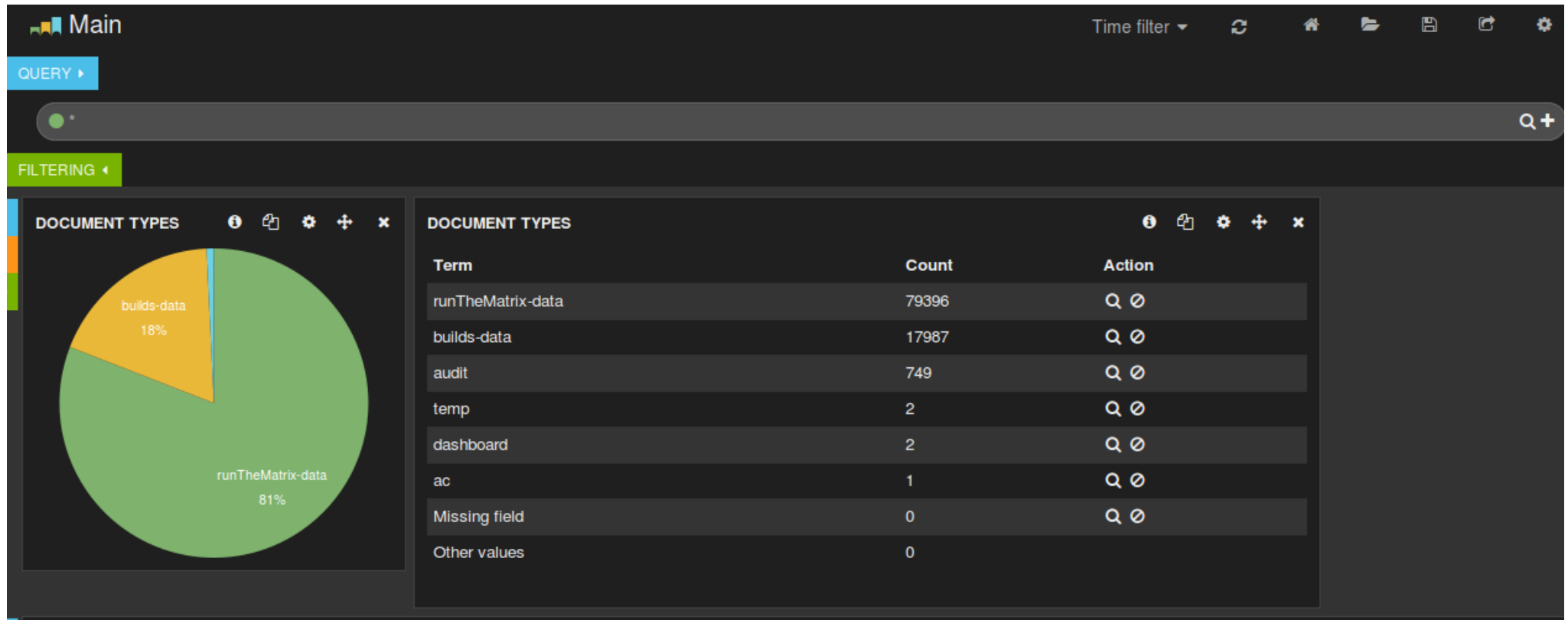
Index	# Docs	Primary Size	# Shards	# Replicas	Status
test	0	230.0B	2	1	open
searchguard	750	471.8KB	2	1	open
kibana-int	4	53.3KB	2	1	open
jenkins	17,987	7.2MB	1	1	open
ib-matrix-00	32,740	1.1GB	1	1	open

# Elastic-Search – Cluster Manager ...

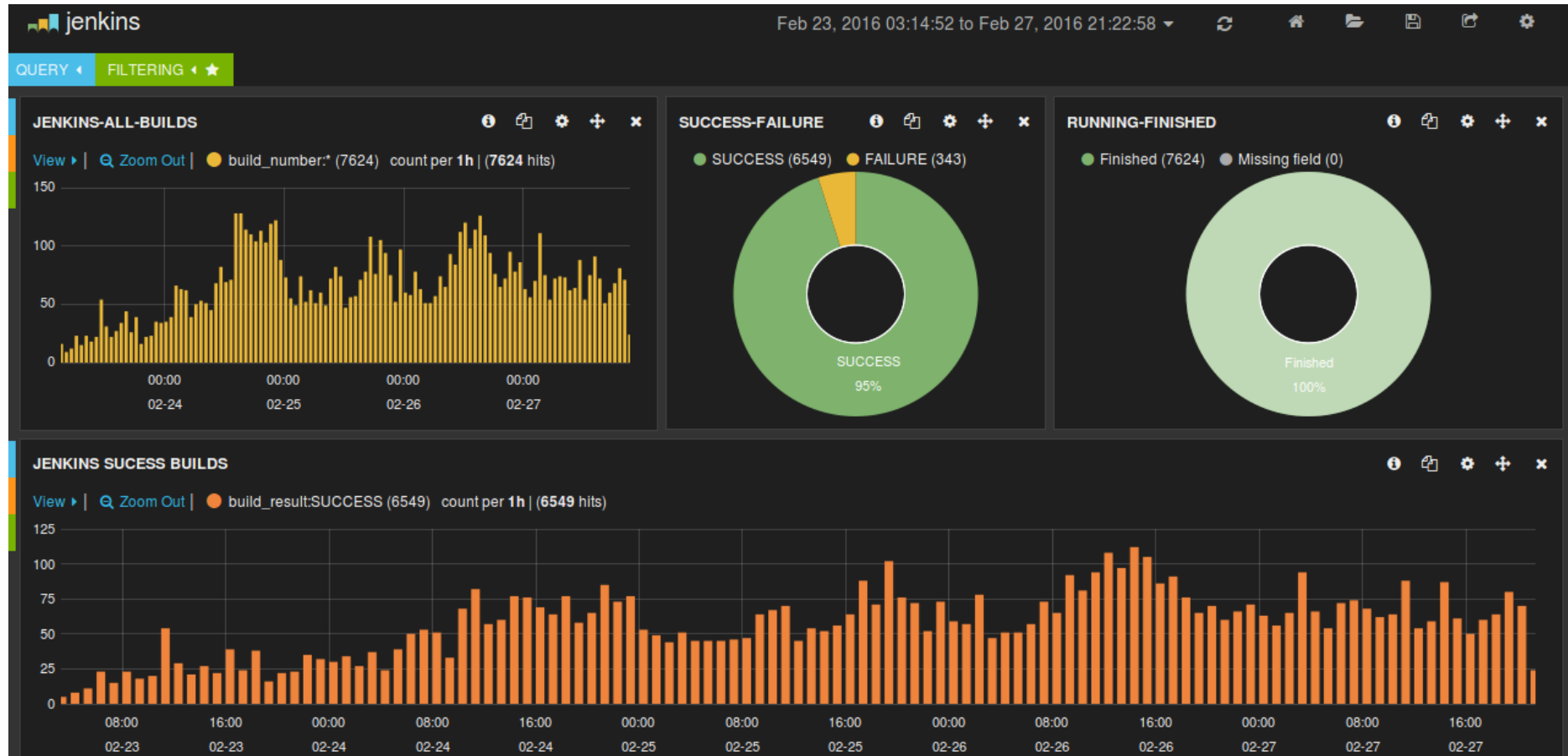
## Demo

[http://cmses-master01.cern.ch:9200/\\_plugin/HQ](http://cmses-master01.cern.ch:9200/_plugin/HQ)

# Monitoring – Kibana ..Overall cluster



# Monitoring – Kibana ...Jenkins Dashboard



# Monitoring – Kibana ...

## Demo

[http://cmses-master01.cern.ch:9200/\\_plugin/kibana](http://cmses-master01.cern.ch:9200/_plugin/kibana)