



ICAT F2F Meeting

ICAT – Kubernetes deployment at Alba

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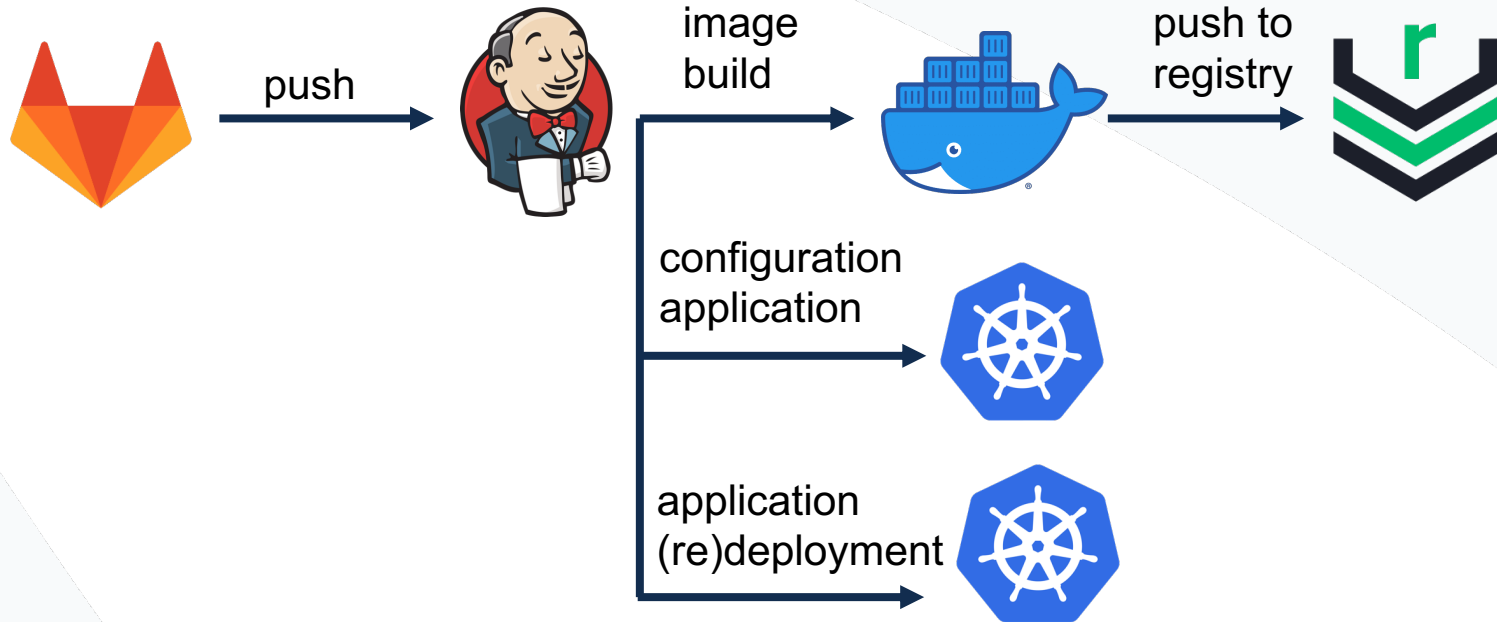
1. Kubernetes cluster
2. CI / CD pipelines
3. Docker images
4. Kubernetes deployment
5. Alb status

Kubernetes cluster

- 256 cores, 625GB RAM.
- Docker and containerd runtimes.
- Managed by Rancher.

Label	RAM (GB)	Cores	Type	Operating System
 kubeprod01	8	4	 VMWare	 Centos 7
 kubeprod02	8	4	 VMWare	 Centos 7
 kubeprod03	8	4	 VMWare	 Centos 7
 kubeprod06	64	24	 Physical	 Centos 7
 kubeprod07	64	24	 Physical	 Centos 7
 kubeprod08	128	20	 Physical	 Rocky Linux 8
 kubeprod09	128	20	 Physical	 Rocky Linux 8
 kubeprod10	128	20	 Physical	 Rocky Linux 8
 kubeprod11	128	20	 Physical	 Rocky Linux 8

CI / CD pipeline



Docker images

- Using Rolf's docker.icat as base image.
- Slightly modified for our needs (log forwarding to Elastic's Logstash through image's built-in Filebeat).

```
ENTRYPOINT ["/usr/bin/supervisord"]
```

```
[program:glassfish]
command=/etc/glassfish/start-glassfish.sh

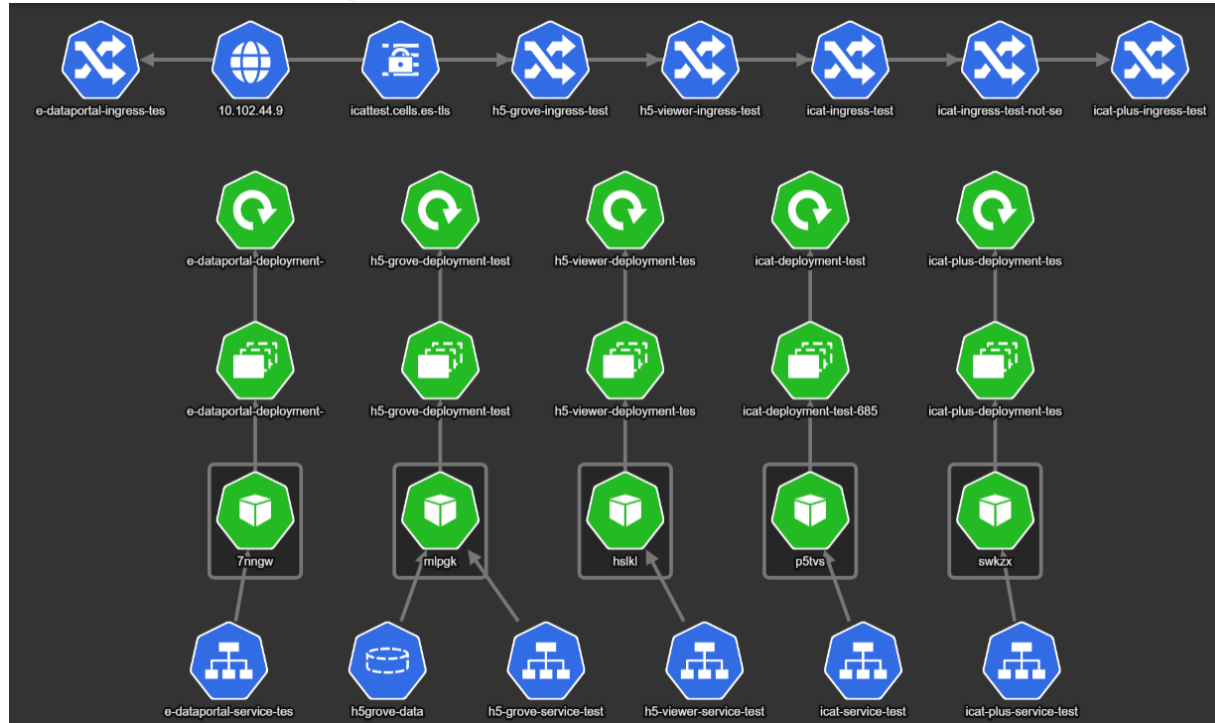
[program:elastic]
command=/usr/bin/filebeat -c /etc/filebeat/filebeat.yml -path.config /etc/filebeat -path.data /var/lib/filebeat
gs /var/log/filebeat
```



moved ingresses to icatatest & icatdemo

Rodrigo Cabezas Quiros authored this post

Kubernetes deployment (I)



- MongoDB (ICAT+) also in K8s (separate namespace).
- Keycloak will be deployed also in K8s.

Kubernetes deployment (II)



- YAML configuration files stored along in repo.
- YAML files definition:
 - Pod – Deployment (container).
 - Service.
 - Ingress(es).
 - Cronjobs.
- Happy to contribute to ICAT with our work.

Where we are

- ICAT updated to v5.
- ICAT, IDS, ICAT+, DataPortal, H5Viewer in K8s.

Work in progress

- Ingestor migration to K8s and upgrade (due to new User Office).
- Implementation of IDS storage plugin for tape archive (new tape archiving system in Alba).
- Other configuration items (Elastic, H5 Viewer config).

Alba status (II)



Next steps (end of 2023)

- Replace authentication plugin with an SSO (Keycloak).
- Deployment of Search API and Scoring service.

- ICAT publication to the public (hopefully also in 2023, pending IT Systems security audit).