OPENSHIFT @ BEC – FROM 0 TO PRODUCTION

REDHAT FORUM COPENHAGEN SEPTEMBER 3, 2018

BEC

AGENDA

1. Introduction to BEC
2. Why a PaaS
3. Vendor selection
4. Preparations for Redhat Pilot
5. RedHat Pilot
6. OCP/Gluster clusters on each datacenter
7. Lessons learned
8. Question

ABOUT

BEC is a Danish, full-service IT house dating back to 1964. We have more than 50 years of experience in developing and operating IT systems for financial institutions operating in Denmark.

BEC provides banking IT-solutions for many different Danish banks.

Turnover 2017 ~ DKK 1500 mill, ~ 700 employees, ~ 25% of Danish businesses have a BEC run bank account.

Located in Roskilde, Herning and Warsaw.

I am Product Owner of the distributed platform and middleware. My team handles OCP infrastructure, monitoring/alerting, upgrades and the talks with our service provider.

WHY A PAAS?

Regulatory and biz opportunities

PSD2 and Open Banking

Organisational change

BEC is on an Agile Tranformation journey

Technology

Infrastructure refresh coming up
Re-platforming to cut cost
Foundation for re-architecting monoliths

Our predictions for our future at the time (that haven't changed):

- We will have many REST services
- We need DevOps ready infrastructure
- We can solve this with containers
- We need extensive ressource control
- We need higher levels of automation and self-service

Hypothesis:

"PaaS concept is right for us"

SELECTION PROCESS

Exploring

- Humble approach: We knew, we didn't know much
- Mindset: We must adapt to DevOps/PaaS concepts, not the other way around
- Want: vendor brain dump and insight – Do not want: requirement checklist bingo

POCs

- User stories for exploring scenarios
- A lot of time spent, even more learning, good investment!
- POC's done in the cloud, isolated from normal BEC infrastructure

Scoring

- 11 weighted criterias – our own little Magic Quadrant
- Scoring was easy – weighting was not
- Red Hat Openshift came out as the overall winner

Openshift and the RedHat Pilot offering

PREPARATIONS FOR REDHAT PILOT

Assembling teams, request resources at service provider, education, …

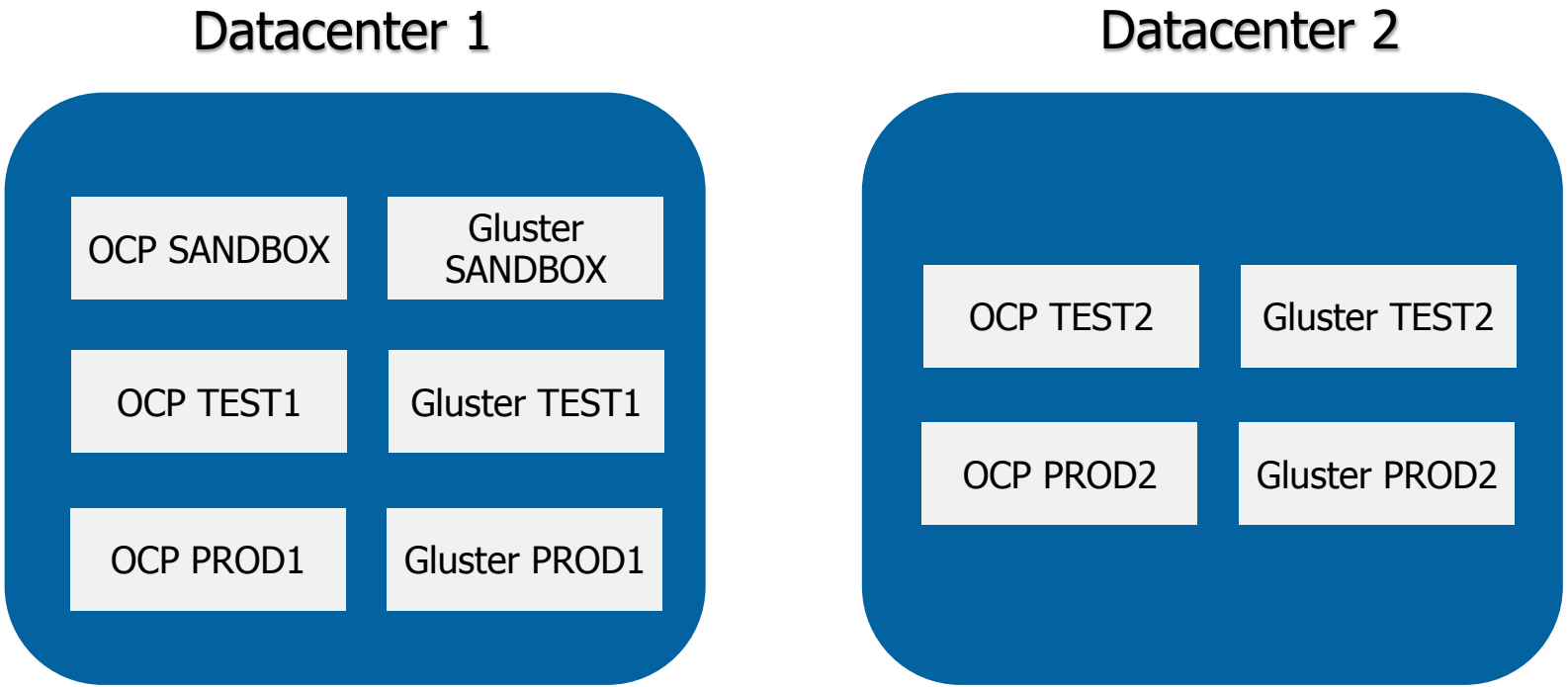
We took these courses as preparation:

- D0180: Introduction to Containers, Kubernetes, and Red Hat OpenShift
  - Good introduction
- D0280: Red Hat OpenShift Administration I
  - Good, but overlapping D0180 a fair bit
- D0290: Developing and Deploying Applications on OpenShift
  - Way too much overlap with 180/280
- D0407: Automation with Ansible I
  - Good
- D0409: Automation with Ansible II: Ansible Tower
  - Good

REDHAT PILOT

- From 0 to production in 8 weeks
  - That's the plan
  - Reality was a bit different
- Pilot's 1. week is about designing the platform to fit BEC
  - Oops: suitable storage for containers! We need Gluster.
  - Initial talks + RH courses indicated NFS as a storage solution.
  - Good idea to include the service provider, while discussing the OCP design.
- SANDBOX cluster
  - Create servers, RedHat installs OCP manually together with the BEC team.
- TEST & PROD clusters (independent on each data center)
  - Install done by BEC with help from RedHat.
- RedHat guides BEC to think about a DevOps setup
  - Self service, Pipelines, PROD deploy processes, CloudForms usage, …
  - Map customer project team roles to AD groups, AD groups to OCP roles.

CLUSTER SETUPS



LESSONS LEARNED

1. Development projects experiences a massive speedup ☺
2. The ability to create new environments quickly is a big deal
3. Production deploys simplified and streamlined
4. Offline upgrading is difficult
   a) The ocp upgrade process really prefers online access to redhat.com
5. Being able to quickly and consistently create VM's is important
6. There is a learning curve to Gluster, especially when things go wrong
   a) Advice: use scsi id's on storage partitions for mounting

QUESTIONS?

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