

Online Databases Status Update

D0 Oracle Cluster (Green), nodes d0olt,d0olu,d0olv

Hardware: Intel Xeon, 2.8 GHz, 2 CPU, 4 Gb RAM

OS: Red Hat Enterprise Linux ES, Release 3 (now all three nodes)

Oracle Software installed: Oracle Database 10g, v10.1.0.4.0

Patching: latest April2007 CPU applied

Databases run as services: production db as db-prd (default node d0olt)

development as db-dev (default node d0olu)

node d0olv - spare

In case of failure: automatic failovers:

production database d0olt → d0olv

development database d0olu → no failover

In case of the failover: all service related cron jobs go to the new node

Access to the D0 online databases is controlled via ACL on Cisco 6500

(access allowed for clients from D0 offline subnet and OEM Grid Control application)

Database sizes & backup strategy

Size:

- production 68 Gb (52 Gb in 2006, 47 Gb in 2005)
- development 66 Gb (58 Gb in 2006, 53 Gb in 2005)

Archive Logs: keep on disk for three consecutive days

CSS-DSG: every 30 mins put archives to dcache -> enstore

RMAN: full automatic backup every day for read/write tablespaces,
keep 2 consecutive days on disk;

ones a week backup for readonly tablespaces

CSS-DSG: move rman files to dcache -> enstore

Export: three times a week

Disks usage

Production DB:

```
d0olt->df -h | grep /db
/dev/sdl6          42G  3.8G  36G  10% /db/users
/dev/dsgprd1/db1  270G  87G  169G  35% /db/prd
/dev/dsgprd2/bk1  270G  142G  115G  56% /db/prdbk1
```

Development DB:

```
d0olu->df -h | grep /db
/dev/sdl6          42G  613M   39G  2% /db/users
/dev/dsgdev1/db1  270G  76G   180G 30% /db/dev
/dev/dsgdev2/bk1  270G  136G  121G 53% /db/devbk1
```

Major Schemas & Applications

d0onprd:

- 1) Calibration databases: SMT_CALIB, CAL_CALIB, CFT_CALIB
MUON_CALIB + applications → to offline DB
- 2) EPICS hardware database (HDB) + applications + web
- 3) RUNS database + runGrabber + runPusher → to offline DB
- 4) Solenoid Hall probes database + solGrabber
- 5) lumGrabber → to offline DB

d0on:

- 1) EPICS slow archiver hisDB
 - Test databases: smt_run2b, stt_param, ..

Moved out of development database recently:

- 1) Designer repository (all users/schemas moved to CSS-DSG designer)
- 2) FPD pot position/alarms database (to production db)

Conclusion

- ❖ D0 online databases are running well, no interrupts except those to apply Oracle quarterly CPU patches
- ❖ CSS-DSG group is taking responsibility to support & maintain D0 online databases (hardware – complete, software – almost done)
- ❖ Remaining tasks:
 - Move hisDB schema from development to production db
 - Partition PMAX of ctf_calib schema (7 Gb now) and smt_calib schema (3 Gb)
 - Consider implementation of partitioning mechanism to cal_calib schema (> 15Gb)
 - Others ..