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What do we do?
The Environment

- RAC at primary site
- RAC at standby site
- 2 separate RAC SCANS
  - separate DNS entries.
  - No changes to configuration to connect to either site
- Oracle Data Guard physical standby with Broker
  - Maximum performance mode
- AIX 6.1 at database and client servers
- Websphere 7
  - Connect to database using ucp
  - No application changes!
  - Multiple servers online at both sites continuously connected.
- Enterprise Edition and Grid Infrastructure 11.2.0.3.10
- Switchover with the online system active
  - Planned event approximately 1 minute
What do we do?
Before planned switchover

SITE P

Web Sphere

ucp

scan 1

DB1
primary

instance 1

instance 2

SITE S

Web Sphere

ucp

scan 2

DB2
standby

instance 1

instance 2

- Quiet time
- Lag time 0

Oracle OpenWorld 2015
What do we do?

After switchover

SITE P

Web Sphere

ucp

scan 1

instance 1

DB1 standby

dg redo

SITE S

Web Sphere

ucp

scan 2

instance 1

instance 2

DB2 primary

- No downtime
- Less than 1 minute delay
- App virtually remains up!

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What do we do?

How does switchover work?

• Planned event in production
• During quiet time
  – Lag time 0
• Switchover from primary to standby
  – Approximately 1 minute
• Impact to end users
  – Approximately 1 minute they are unable to complete transactions
  – No transactions lost
• One connection string works for both sites:
  
  jdbc:oracle:thin:@ (DESCRIPTION=
  (CONNECT_TIMEOUT=30) (RETRY_COUNT=150)(RETRY_DELAY=4)
  (ADDRESS_LIST=(LOAD_BALANCE=on)
    (ADDRESS=(PROTOCOL=tcp)(HOST=scan1) (PORT=1521)))
  (ADDRESS_LIST=(LOAD_BALANCE=on)
    (ADDRESS=(PROTOCOL=tcp) (HOST=scan2)(PORT=1521)))
  (CONNECT_DATA=(SERVICE_NAME=WEBSERVICE)));
Next steps

Move to 12.1.0.2
• Next few months
• Test Application Continuity with Transaction Guard
  – Using Websphere with UCP
  – Test planned and unplanned switchovers
• Production use of Application Continuity?
  – Depends on test results and business need for unplanned.
  – Not in 2015, perhaps 2016