

# Scotiabank

Tim Quinlan is a Database Architect at Scotiabank Canada, responsible for the architecture, design and implementation of high performance, high availability databases for the bank for the entire lifecycle from development through production. An Oracle certified Database Administrator with experience in Oracle 7 through the current release, Tim works with enterprise-wide Data Warehouse and transactional Databases.

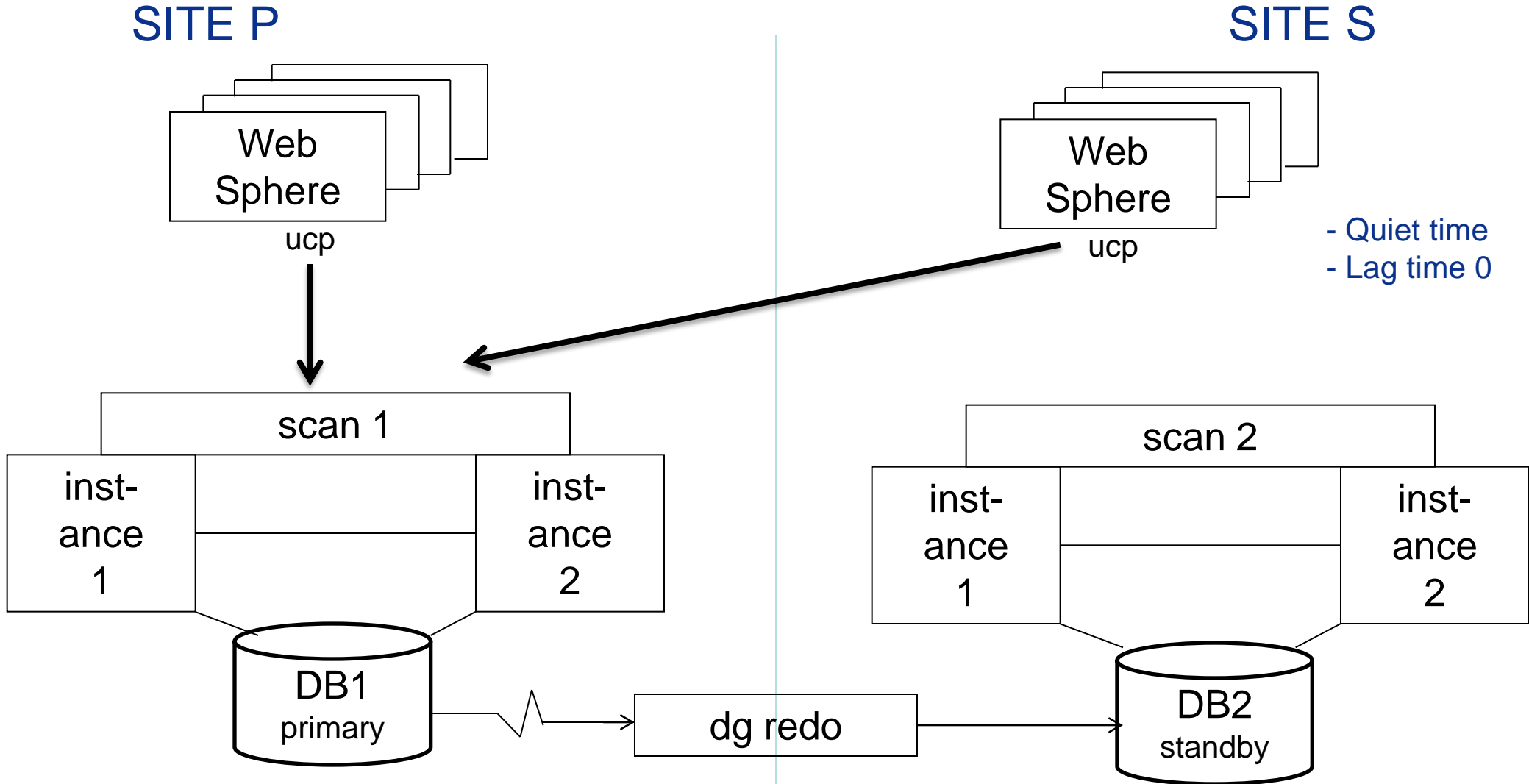
# What do we do?

## 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

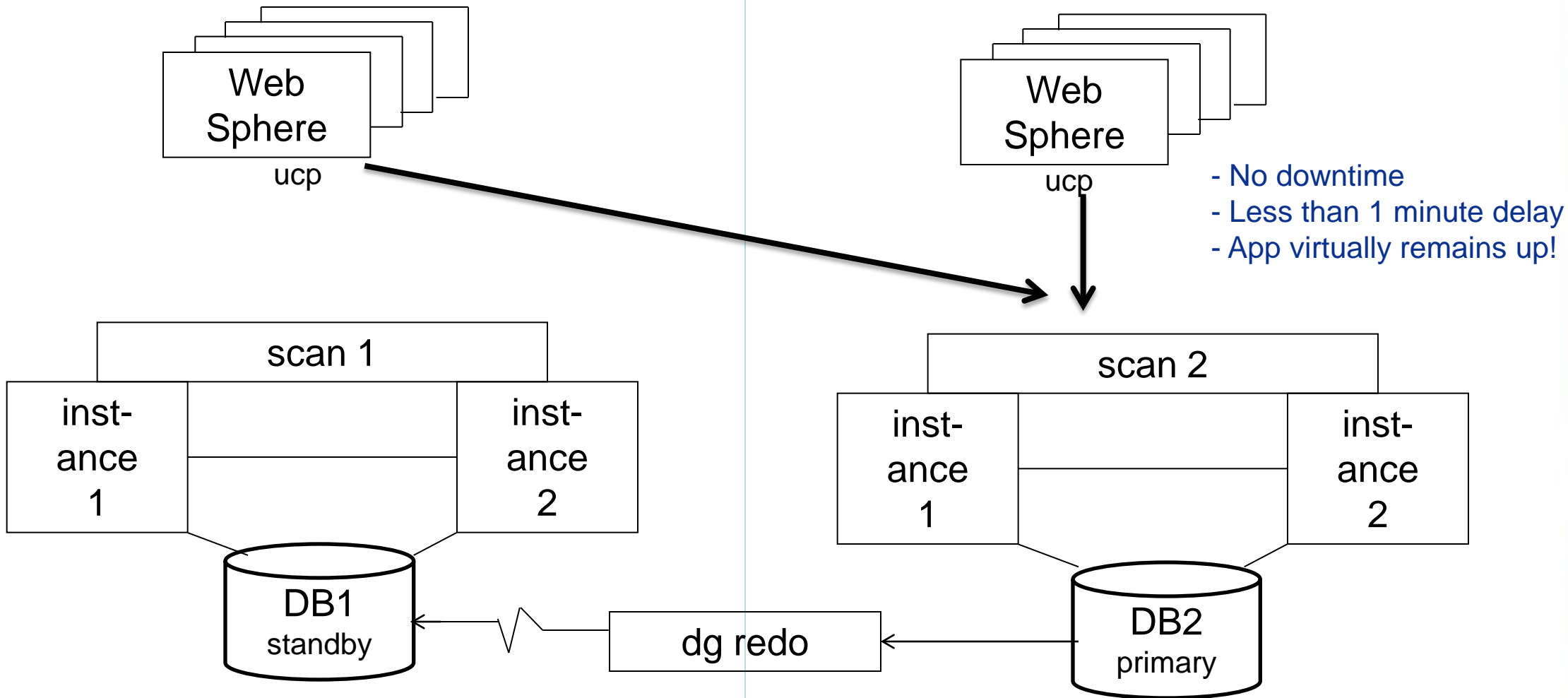


# What do we do?

After switchover

SITE P

SITE S



# 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