
<JSTORM>

EJB

Best Practices 2



JSTORM
<http://www.jstorm.pe.kr>

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	EJB 1.1 EJB 2.0
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Benchmark information	

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EJB Best Practices 2

5

가

CMP(Container managed persistence)
BMP(Bean managed persistence)

5.1

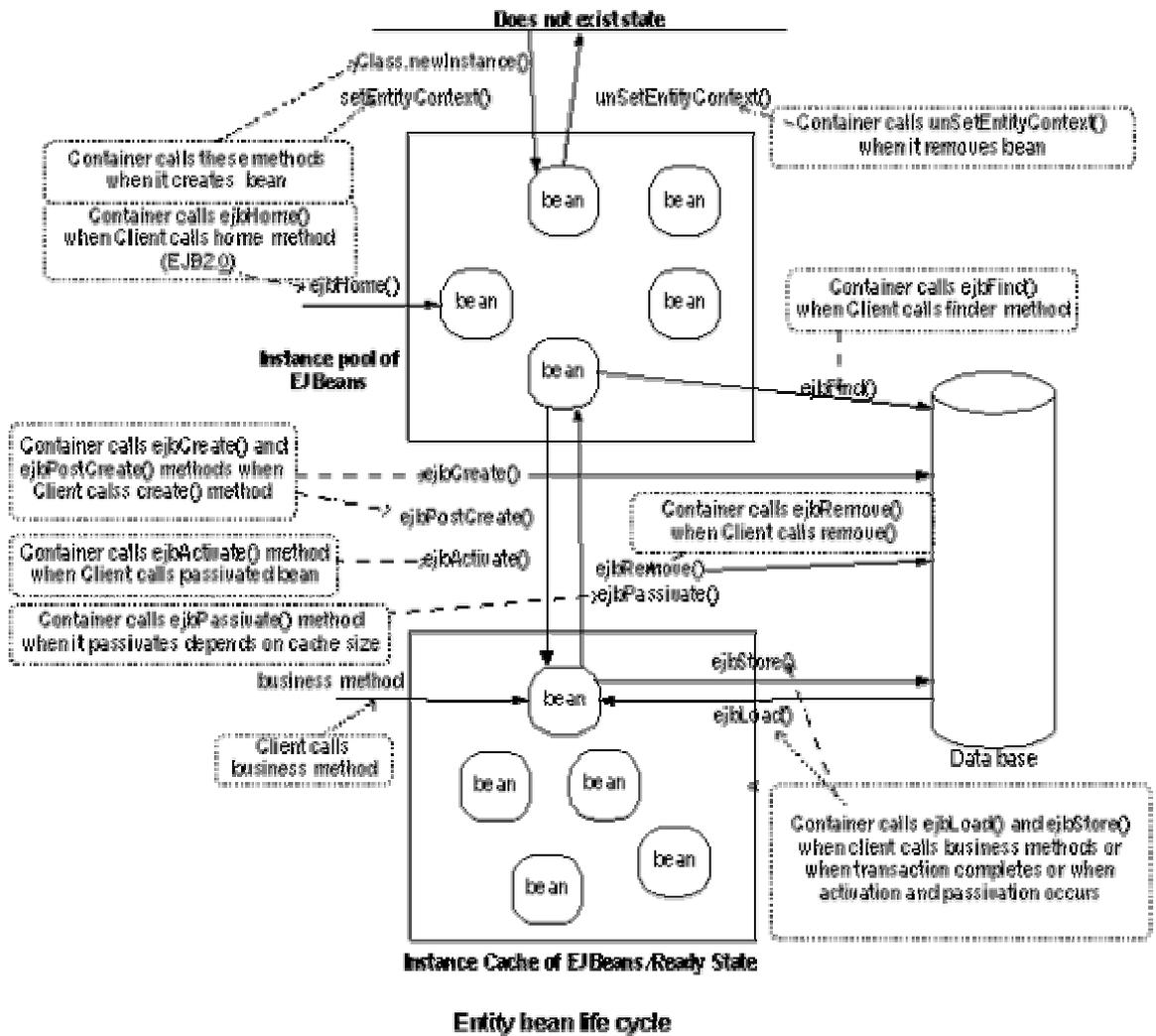
가

가

CMP BMP

가

가



8 :

가
가
가

jar.xml

<pool>

weblogic-ejb-

```
<max-beans-in-free-pool>100</max-beans-in-free-pool>  
<initial-beans-in-free-pool>50</initial-beans-in-free-pool>  
</pool>
```

```
<entity-cache>  
  <max-beans-in-cache>100</max-beans-in-cache>  
</entity-cache>
```

```
JBoss      jboss.xml  <instance-pool>
```

```
<instance-cache>  
<container-cache-conf>  
  <cache-policy>  
    <cache-policy-conf>  
      <min-capacity>5</min-capacity>  
      <max-capacity>10</max-capacity>  
    </cache-policy-conf>  
  </cache-policy>  
</container-cache-conf>  
</instance-cache>
```

```
100      ,      50      50      100  
가      EJB      /      Class.newInstance()  
50      setEntityContext()  
idle      unSetEntityContext()  
가 create()      ejbCreate()
```


5.2

가
() ()
() 가 (/finder/),
) 가
가
가
(/finder/)
(
)
Jboss
EJB
가

5.3

가
()
Jboss
가
ejbLoad() 가
ejbActivate()
ejbStore()
ejbPassivate()
ejbLoad().ejbStore()
() 가
가

.
:
()

가

5.4 setEntityContext()

setEntityContext()

.
, DataSource
'setSessionContext()
'Cache EJBHome object
references'

가

setEntityContext()
가

5.5 unSetEntityContext()

unSetEntityContext()
(
)

5.6

가

5.7.1

Transaction Level	Permitted Phenomena			Performance impact
	Dirty reads	Non Repeatable reads	Phantom reads	
TRANSACTION_READ_UNCOMMITTED	YES	YES	YES	FASTEST
TRANSACTION_READ_COMMITTED	NO	YES	YES	FAST
TRANSACTION_REPEATABLE_READ	NO	NO	YES	MEDIUM
TRANSACTION_SERIALIZABLE	NO	NO	NO	SLOW

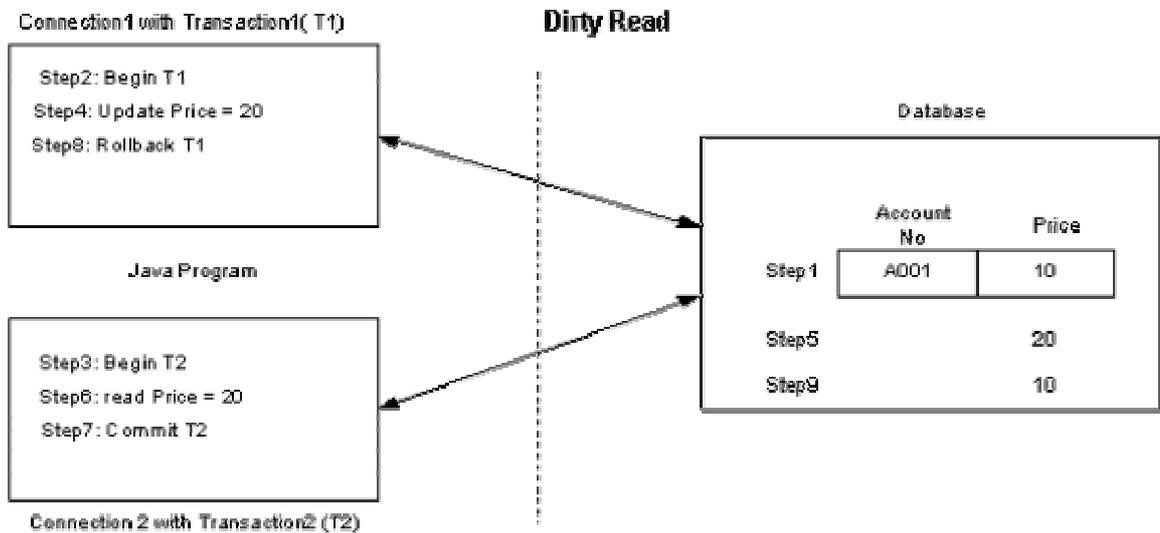
YES

NO

가

5.7.2 Dirty read

Dirty read



Step 1: PRODUCT = A001 PRICE = 10 가

Step 2: 1 1(T1)

Step 3: 2가 2(T2)

Step 4: T1 PRODUCT = A001 PRICE = 20

Step 5: PRODUCT = A001 PRICE = 20

Step 6: T2가 PRODUCT = A001 PRICE = 20

Step 7: T2가

Step 8: T1

T2가

PRICE 10 20 PRODUCT = A001

가

가 TRANSACTION_READ_UNCOMMITTED

TRANSACTION_NONE

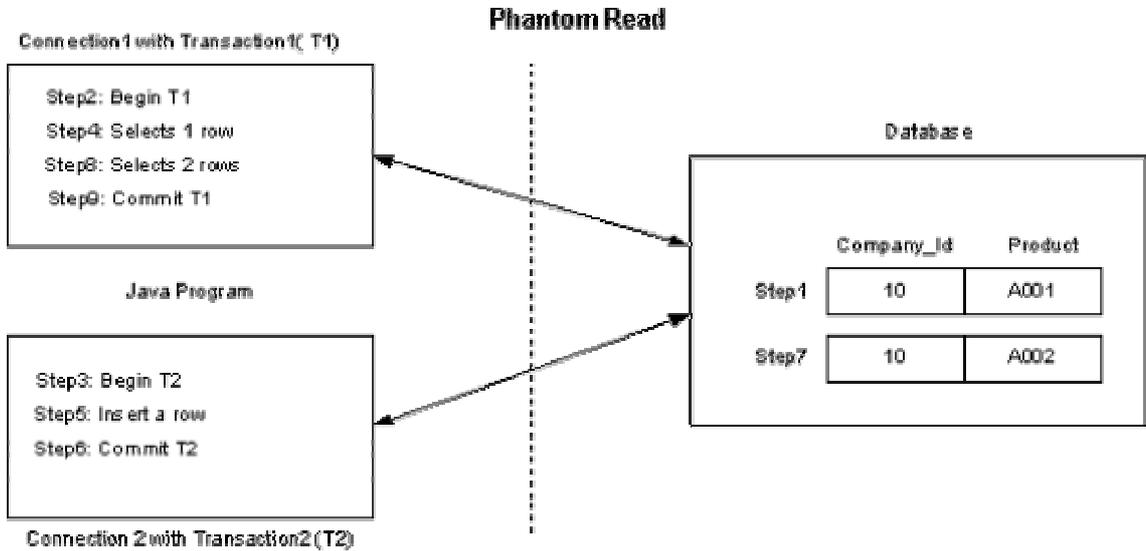
TRANSACTION_READ_COMMITTED

5.7.3 Unrepeatable read

Unrepeatable read

5.7.4 Phantom read

Phantom read



Step 1: PRODUCT = A001 COMPANY_ID = 10
가

Step 2: 1 1(T1)

Step 3: 2가 2(T2)

Step 4: T1 SELECT PRODUCT WHERE COMPANY_ID = 10

Step 5: T2가 INSERT PRODUCT=A002 WHERE COMPANY_ID= 10

Step 6: T2가

Step 7: COMPANY_ID = 10 가 2

Step 8: T1 SELECT PRODUCT WHERE COMPANY_ID=10
1 가 2 가

Step 9: T1

T1 SELECT 1
가 2 가
TRANSACTION_SERIALIZABLE

5.7.5

가
가 가 ,
 TRANSACTION_READ_ UNCOMMITTED
.
.
 가
 TRANSACTION_SERIALIZABLE
.
.
 가
TRANSACTION_READ_COMMITTED 가
.
.
 가 , TRANSACTION_REPEATABLE_READ
.
.
 :
 가
TRANSACTION_READ_COMMITTED
TRANSACTION_SERIALIZABLE
.
TRANSACTION_READ_COMMITTED .

5.10 dirty

EJB
ejbStore()
가
(ejbStore())
)가
, CMP1.1
dirty
weblogic-ejb-jar.xml is-
modified-method-name 가 EJB 2.0
CMP 가
BMP
가
가

5.11

EJB
4
가
가
/ 가
EJB
weblogic-ejb-
jar.xml
<delay-updates-until-end-of-tx>
가
가

5.12

CMP () (1:1, 1:M, M:M)

5.13 BMP CMP

EJB 2.0 CMP BMP
EJB CMP가 EJB
2.0 CMP
EJB 2.0 CMP 가
() 가
CMP BMP
BMP finder
CMP 가 CMP

5.14 ejbHome()

EJB 2.0 ejbHome()
가) (,
EJBObject가
ejbHome() 가 가

- Optimization with Connection
 - Set optimal row pre-fetch value
 - Use Connection pool
 - Control transaction
 - Choose optimal isolation level
 - Close Connection when finished
- Optimization with Statement
 - Choose right Statement interface
 - Do batch update
 - Do batch retrieval using Statement
 - Close Statement when finished
- Optimization with ResultSet
 - Do batch retrieval using ResultSet
 - Setup proper direction of processing rows
 - Use proper get methods
 - Close ResultSet when finished
- Optimization with SQL Query
 - Cache the read-only and read-mostly data
 - Fetch small amount of data iteratively rather than whole data at once
- JDBC Key Points

BMP

5.17

JDBC

JDBC EJB' . 'Choosing between EJB vs. non-가 . EJB

JDBC JDBC

, 5000 가

JDBC가 가

JDBC

5.18

EJB가

EJB

가

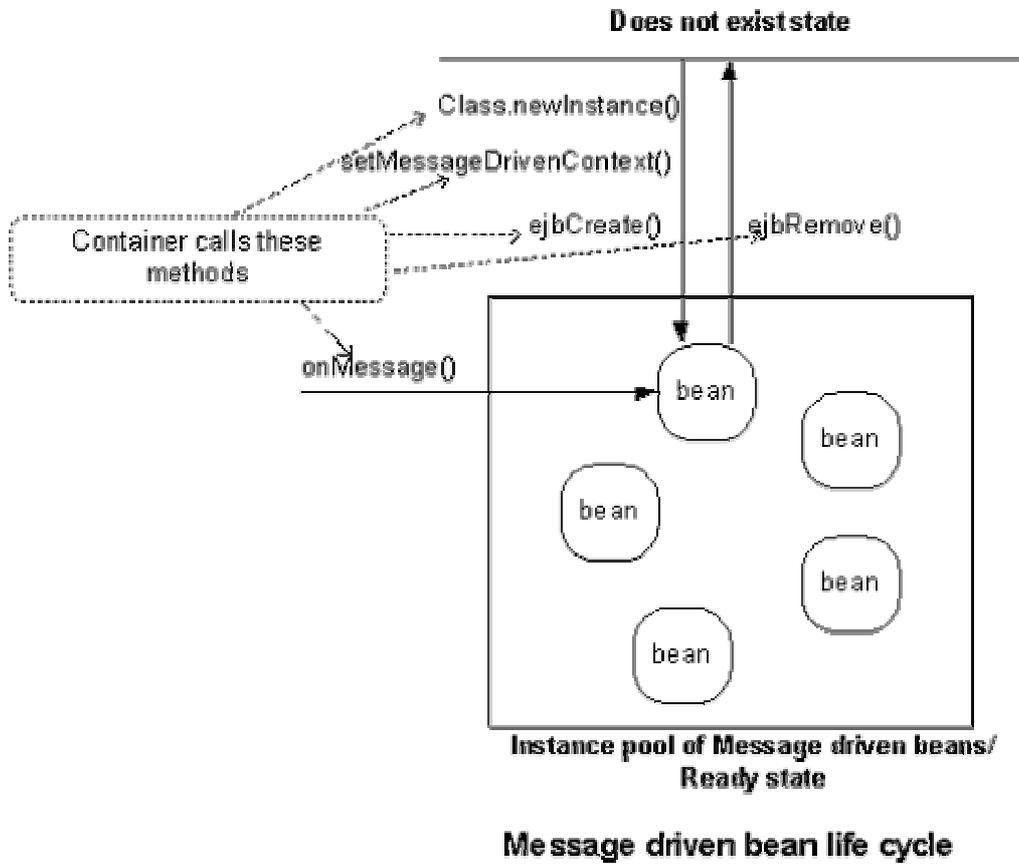
6

JMS
MessageConsumer.receive()
가
EJB 2.0
JMS

EJB
'Cache EJBHome object references', 'Use Clustering
for scalability', 'Tune thread count'
가

6.1

가
가
가
가
RMI/IIOP
가
messageListener
onMessage()
JMS
JMS
가



가
weblogic-ejb-jar.xml

```
<pool>  
  <max-beans-in-free-pool>100</max-beans-in-free-pool>  
  <initial-beans-in-free-pool>50</initial-beans-in-free-pool>  
</pool>
```

50 100
가 EJB / Class.newInstance()
50

setMessageDrivenContext(ctx) and
ejbCreate() methods

50 50
가 가 50
가 100 ()가
가 100 가 ?
가

가
onMessage(Message msg)

가
(LRU, Least Recently Used)
ejbRemove()

(
)
가

6.2

```
EJB /
)
weblogic-ejb-jar.xml <pool>
(
가
)
JMS
가
wait
```

6.3 setMessageDrivenContext().ejbCreate()

```
ejbCreate()
setMessageDrivenContext()
ConnectionFactory
, Destination
, DataSource
가
가
가
'Cache EJBHome object
references'
가
onMessage()
```

setMessageDrivenContext() ejbCreate()
.

6.4 ejbRemove()

.' ejbRemove()
()
가 .