

Isolation Levels

Thursday, December 7, 2017 8:31 PM

Isolation level	Dirty read	Nonrepeatable read	Phantom
Read uncommitted	Yes	Yes	Yes
Read committed	No	Yes	Yes
Repeatable read	No	No	Yes
Snapshot	No	No	No
Serializable	No	No	No

```
ConcurencySession...d (LABS\delip (53)) X
1 Use Northwind;
2 Go
3
4 Begin Transaction
5   Update Customers
6     Set CompanyName = 'What??';
7   --Run to This Point...
8   WAITFOR DELAY '00:00:30'
9 Rollback

ConcurencySession...r (LABS\delip (54)) X ConcurencySession...d (LABS\delip (53))
1 Use Northwind;
2 Go
3 --SET TRANSACTION ISOLATION LEVEL READ UNCOMMITTED --Data Base Wide / No Lock
4 SET TRANSACTION ISOLATION LEVEL READ COMMITTED --Lock Protected / Default
5 Select * From Customers
6 --With (NoLock) --For this Statement/Connection only...
7
8
9

CheckLocks.sql - (LABS\delip (56)) X ConcurencySession...r (LABS\delip (54)) ConcurencySession...d (L
1 USE [master]
2 GO
3 SELECT session_id
4 ,db_name(database_id) as 'Database_Name'
5 ,sql_text.text as 'SQL_Blocked'
6 ,blocking_session_id
7 ,wait_time
8 ,wait_type
9 ,last_wait_type
10 ,wait_resource
11 ,transaction_isolation_level
12 ,lock_timeout
13 FROM sys.dm_exec_requests
14 CROSS APPLY sys.dm_exec_sql_text(sql_handle) as sql_text
15 WHERE blocking_session_id != 0
```

Transactions

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```
CommitRollback.sql...r (LABS\dellp (57)) X CheckLocks.sql - (LABS\dellp (56)) ConcurrencySession...r (LABS\dellp (54)) Concurr...

1 Use Northwind;
2 Go
3
4 Create Table dbo.CustomerTransactions
5 (
6     CustomerID int Identity(1,1) Not Null Primary Key,
7     CustomerName varchar(10) Not Null
8 );
9 Go
10
11 Begin Try
12     Begin Transaction;
13     Insert Into dbo.CustomerTransactions (CustomerName) Values ('AnyWare');
14     Insert Into dbo.CustomerTransactions (CustomerName) Values ('ISInc');
15     Select * From CustomerTransactions;
16     --Create Error, Customer Name > 10
17     Insert Into dbo.CustomerTransactions (CustomerName) Values ('12345678901');
18     Commit Transaction;
19 End Try
20 Begin Catch
21     Select ERROR_NUMBER(), ERROR_MESSAGE();
22     RollBack Transaction;
23 End Catch
24
25 Select * From CustomerTransactions;
26
27 Drop Table dbo.CustomerTransactions
28
29
```