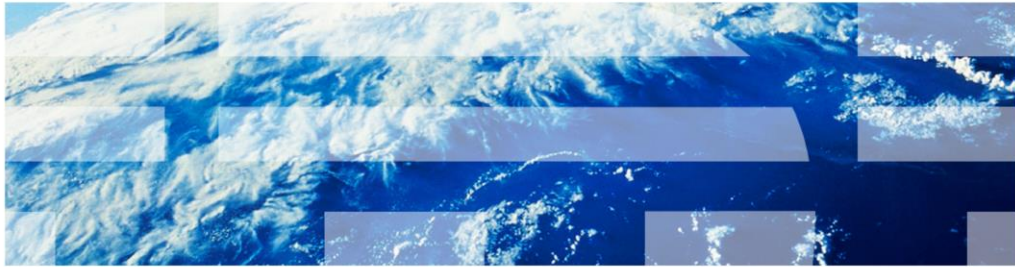


# IBM Tivoli Netcool OMNibus ODBC Gateway v5

## Modifying ODBC gateway log settings



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IBM Tivoli Netcool OMNibus ODBC gateway version 5.0, Modifying ODBC gateway log settings.

## Objectives

When you complete this module, you can perform the following tasks:

- Discuss the uses of Open Database Connectivity (ODBC) gateway logs
- List and discuss the four ODBC gateway log message levels
- Modify the default ODBC gateway log message level
- Switch on or off the logging of ODBC gateway SQL commands that are sent to the Netcool OMNIBus object server
- List and discuss the four types of statistical data that are available for log capture
- Switch on or off the logging of statistical data

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## Logging gateway information

- Using the ODBC gateway, authorized users and administrators can capture system information within a log file
- Use logs for the following purposes:
  - Monitoring system events
  - Auditing issued SQL commands
  - Viewing ODBC gateway statistics
  - Troubleshooting ODBC gateway problems
  - Verifying ODBC gateway problem resolution

- With ODBC gateway logs, authorized users and administrators can capture system information.

- Use logs for many purposes: monitoring events, auditing issued SQL commands, viewing gateway statistics, troubleshooting, and verifying problem resolution.

## Log configuration file nco\_g\_odbc.props

- Controls ODBC gateway log settings
- Has three specific properties within nco\_g\_odbc.props:
  - MessageLevel
  - Gate.LogOSSql
  - Gate.LogStatisticsData

- The nco\_g\_odbc.props log configuration file controls ODBC gateway log settings.
- Three specific properties of importance are within the nco\_g\_odbc.props file: MessageLevel, Gate.LogOSSql, and Gate.LogStatisticsData.

## Logging properties

Increasing or decreasing the logging level requires modifying the properties of the nco\_g\_odbc.props log configuration file

- MessageLevel, when set for warn, error, info, or debug. Default is warn
- When Gate.LogOSSql set to TRUE and MessageLevel is set to debug, all SQL commands that go to the object server are logged
- When Gate.LogStatisticsData is set to TRUE and MessageLevel is set to debug, the following information is logged:
  - Statistical data on the number of events that is read from the object server
  - Statistical data on number that is written to the database
  - Statistical data on number of errors
  - Statistical data on completion time

- Increasing or decreasing the logging level requires making modifications to nco\_g\_odbc.props log configuration file properties.
- Starting with MessageLevel, the settings available are warn, error, info, and debug. The default setting for this property is warn.
- A combination of property settings logs enter SQL commands.
- When Gate.LogOSSql is set to TRUE and MessageLevel is set debug, all SQL commands that go to the object server are placed in ODBC gateway logs.
- Another combination of properties settings logs statistics.
- When Gate.LogStatisticsData is set to TRUE and the MessageLevel is set to debug, various statistics are logged.
- Increasing or decreasing the logging level requires modifying the nco\_g\_odbc.props log configuration file.

## Structured query language commands of the logging object server

```
10/04/09 15:27:09: Debug: D-UNK-000-000: Sybase: Execute SQL command [INSERT INTO alerts.status
(Agent,AlertGroup,AlertKey,Class,Identifier,Manager,Node,NodeAlias,Severity,Summary,Type,FirstOccurrence,LastOccurrence)
VALUES('nco_g_odbc:JournalTableInsProcThread','Gateway','nco_g_odbc:JournalTableInsProcThread:1',0,'liger:nco_g_odbc:JournalTableInsProcThread:1:2','GatewayWatch','liger','9.52.130.193',1,'Connection to the database has been
established. [JournalTableInsProcThread]',2,1254695228,1254695228);]
10/04/09 15:28:08: Debug: D-UNK-000-000: Sybase: Execute SQL command [SELECT
Acknowledged,Agent,AlertGroup,AlertKey,Class,Customer,EventId,ExpireTime,FirstOccurrence,Flash,Grade,Identifier,
LastOccurrence,LocalNodeAlias,LocalPriObj,LocalRootObj,LocalSecObj,Location,Manager,NmosCauseType,NmosSerial,Node,NodeAlias,OwnerGID,OwnerUID,PhysicalCard,PhysicalPort,PhysicalSlot,Poll,ProcessReq,RemoteNodeAlias,
RemotePriObj,RemoteRootObj,RemoteSecObj,Serial,ServerName,ServerSerial,Service,Severity,StateChange,Summary,SuppressEscl,Tally,TaskList,Type,X733CorrNotif,X733EventType,X733ProbableCause,X733SpecificProb FROM
alerts.status WHERE Serial IN (503,506,509,508,507,505,504,502,499);]
```

This slide shows a log capture of SQL commands. For SQL log captures, the Gate.LogOSSql property is set to TRUE and MessageLevel property is set to debug, All object server SQL commands are logged when these two properties are set.

## Logging statistical data

```
10/04/09 15:28:09: Debug: D-UNK-000-000: Statistics: Current overload value = 0.000000
10/04/09 15:28:09: Information: I-UNK-000-000: Reader Statistics: Batches=4
Insert(31)/Update(2)/Delete(0)/Details(0)/Journals(3) [Avg. 0 events a second]
10/04/09 15:28:09: Information: I-UNK-000-000: Writer Statistics: Batches=4 Insert[Sent(31)/Errors(0)]
Update[Sent(2)/Errors(0)] Delete[Sent(0)/Errors(0)] Details[Sent(0)/Errors(0)]
Journals[Sent(3)/Errors(0)] [Avg. 0 events a second]
```

This slide shows the log capture of statistical information. Remember that the Gate.LogStatisticsData property is set to TRUE and MessageLevel property is set to debug, Logged statistics data is as follows: the number of events that are read from the object server, the number of events that are written to the database, the number of errors, and the completion time.

## Monitoring the log

- Enable additional logging and run gateway until problem is seen again
- On gateway startup, ensure the following sequential actions:
  1. Work regions are recovered
  2. Command, statistics, and gateway ports are opened
  3. Database connections are made
  4. Object server connections are made
  5. ODBC gateway sends all object server data to the gateway that is not in the work regions
  6. Gateway receives new inserts, updates, and deletes during every Insert Delete Update Cycle (IDUC)

Monitoring the log for problems to occur again calls for enabling additional ODBC gateway logging and waiting for the problem to be seen again.

1. When the gateway starts, ensure that work regions are recovered and that ports for commands and statistics are opened.
2. Ensure that the database and object server connections are made.
3. Make sure that the gateway sends all object server data to the gateway that is NOT a part of the work regions.
4. Make sure the gateway receives new inserts, updates, and deletes during every Insert, Update, and Delete cycle.



## Log message level debug

```
10/04/09 15:27:07: Debug: D-UNK-000-000: WorkAreaQData: Region 'misc_workarea' recovered
from '/space/clgrimes/netcool721/omnibus/var/nco_g_odbc/'.
10/04/09 15:27:08: Debug: D-UNK-000-000: All threads in thread group 'System' are ready.
10/04/09 15:27:08: Debug: D-UNK-000-000: All threads in thread group 'Writer' are ready.
10/04/09 15:27:08: Debug: D-UNK-000-000: Sybase: IDUC Connection to host 'host name'
established.
10/04/09 15:27:09: Debug: D-UNK-000-000: All threads in thread group 'Reader' are ready.
10/04/09 15:27:08: Debug: D-UNK-000-000: Thread 'InputDataProcDistThread': ObjectServer data
resynchronisation started
```

This slide shows the log capture of messages of work area recovery, and that system and writer are ready. Also, the IDUC connection is established, the reader is ready, and resynchronization has started.

## Summary

Now that you have completed this module, you can perform the following tasks:

- Discuss the uses of Open Database Connectivity (ODBC) gateway logs
- List and discuss the four ODBC gateway log message levels
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