



Status Codes

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Neo4j v4.4

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The Neo4j status codes for Neo4j v4.4.

Each status code follows the same format:

```
Neo.[Classification].[Category].[Title]
```

The fact that a status code is returned by the server does not always mean there is a fatal error. Status codes can also indicate transient problems that may go away if you retry the request.

What the effect of the status code is can be determined by the classification.

Classifications

Classification	Description	Effect on transaction
ClientError	The Client sent a bad request - changing the request might yield a successful outcome.	Rollback
ClientNotification	There are notifications about the request sent by the client.	None
TransientError	The database cannot service the request right now, retrying later might yield a successful outcome.	Rollback
DatabaseError	The database failed to service the request.	Rollback

Status codes

This is a complete list of all status codes Neo4j may return, and what they mean.

Status Code	Description
<code>Neo.ClientError.Cluster.NotALeader</code>	The request cannot be processed by this server. Write requests can only be processed by the leader.
<code>Neo.ClientError.Cluster.Routing</code>	Unable to route the request to the appropriate server
<code>Neo.ClientError.Database.DatabaseNotFound</code>	The request referred to a database that does not exist.
<code>Neo.ClientError.Database.ExistingDatabaseFound</code>	The request referred to a database that already exists.
<code>Neo.ClientError.Fabric.AccessMode</code>	The request could not be completed due to access mode violation
<code>Neo.ClientError.General.ForbiddenOnReadOnlyDatabase</code>	This is a read only database, writing or modifying the database is not allowed.
<code>Neo.ClientError.General.InvalidArguments</code>	The request contained fields that were empty or are not allowed.
<code>Neo.ClientError.General.TransactionOutOfMemoryError</code>	The transaction used more memory than was allowed. The maximum allowed size for a transaction can be configured with 'dbms.memory.transaction.max_size' in the neo4j configuration (normally in 'conf/neo4j.conf' or, if you are using Neo4j Desktop, found through the user interface).
<code>Neo.ClientError.General.UpgradeRequired</code>	This transaction required database to be of a higher kernel version than it is. Make sure that dbms has been correctly upgraded before retrying this operation.
<code>Neo.ClientError.Procedure.ProcedureCallFailed</code>	Failed to invoke a procedure. See the detailed error description for exact cause.
<code>Neo.ClientError.Procedure.ProcedureNotFound</code>	A request referred to a procedure that is not registered with this database instance. If you are deploying custom procedures in a cluster setup, ensure all instances in the cluster have the procedure jar file deployed.
<code>Neo.ClientError.Procedure.ProcedureRegistrationFailed</code>	The database failed to register a procedure, refer to the associated error message for details.
<code>Neo.ClientError.Procedure.ProcedureTimedOut</code>	The procedure has not completed within the specified timeout. You may want to retry with a longer timeout.
<code>Neo.ClientError.Procedure.TypeError</code>	A procedure is using or receiving a value of an invalid type.
<code>Neo.ClientError.Request.Invalid</code>	The client provided an invalid request.

Status Code	Description
Neo.ClientError.Request.InvalidFormat	The client provided a request that was missing required fields, or had values that are not allowed.
Neo.ClientError.Request.InvalidUsage	The client made a request but did not consume outgoing buffers in a timely fashion.
Neo.ClientError.Schema.ConstraintAlreadyExists	Unable to perform operation because it would clash with a pre-existing constraint.
Neo.ClientError.Schema.ConstraintNotFound	The request (directly or indirectly) referred to a constraint that does not exist.
Neo.ClientError.Schema.ConstraintValidationFailed	A constraint imposed by the database was violated.
Neo.ClientError.Schema.ConstraintViolation	Added or changed index entry would violate constraint.
Neo.ClientError.Schema.ConstraintWithNameAlreadyExists	Unable to perform operation because constraint with given name already exists.
Neo.ClientError.Schema.EquivalentSchemaRuleAlreadyExists	Unable to perform operation because an equivalent schema rule already exists.
Neo.ClientError.Schema.ForbiddenOnConstraintIndex	A requested operation can not be performed on the specified index because the index is part of a constraint. If you want to drop the index, for instance, you must drop the constraint.
Neo.ClientError.Schema.IndexAlreadyExists	Unable to perform operation because it would clash with a pre-existing index.
Neo.ClientError.Schema.IndexMultipleFound	The request referenced an index by its schema, and multiple matching indexes were found.
Neo.ClientError.Schema.IndexNotApplicable	The request did not contain the properties required by the index.
Neo.ClientError.Schema.IndexNotFound	The request (directly or indirectly) referred to an index that does not exist.
Neo.ClientError.Schema.IndexWithNameAlreadyExists	Unable to perform operation because index with given name already exists.
Neo.ClientError.Schema.RepeatedLabelInSchema	Unable to create index or constraint because schema had a repeated label.
Neo.ClientError.Schema.RepeatedPropertyInCompositeSchema	Unable to create index or constraint because schema had a repeated property.
Neo.ClientError.Schema.RepeatedRelationshipTypeInSchema	Unable to create index or constraint because schema had a repeated relationship type.

Status Code	Description
Neo.ClientError.Schema.TokenNameError	A token name, such as a label, relationship type or property key, used is not valid. Tokens cannot be empty strings and cannot be null.
Neo.ClientError.Security.AuthenticationRateLimit	The client has provided incorrect authentication details too many times in a row.
Neo.ClientError.Security.AuthorizationExpired	The stored authorization info has expired. Please reconnect.
Neo.ClientError.Security.CredentialsExpired	The credentials have expired and need to be updated.
Neo.ClientError.Security.Forbidden	An attempt was made to perform an unauthorized action.
Neo.ClientError.Security.Unauthorized	The client is unauthorized due to authentication failure.
Neo.ClientError.Statement.AccessMode	The request could not be completed due to access mode violation.
Neo.ClientError.Statement.ArgumentError	The statement is attempting to perform operations using invalid arguments.
Neo.ClientError.Statement.ArithmeticError	Invalid use of arithmetic, such as dividing by zero.
Neo.ClientError.Statement.ConstraintVerificationFailed	A constraint imposed by the statement is violated by the data in the database.
Neo.ClientError.Statement.EntityNotFound	The statement refers to a non-existent entity.
Neo.ClientError.Statement.ExternalResourceFailed	Access to an external resource failed.
Neo.ClientError.Statement.NotSystemDatabaseError	This is an administration command and it should be executed against the system database.
Neo.ClientError.Statement.ParameterMissing	The statement refers to a parameter that was not provided in the request.
Neo.ClientError.Statement.PropertyNotFound	The statement refers to a non-existent property.
Neo.ClientError.Statement.RuntimeUnsupportedError	This query is not supported by the chosen runtime.
Neo.ClientError.Statement.SemanticError	The statement is syntactically valid, but expresses something that the database cannot do.
Neo.ClientError.Statement.SyntaxError	The statement contains invalid or unsupported syntax.
Neo.ClientError.Statement.TypeError	The statement is attempting to perform operations on values with types that are not supported by the operation.
Neo.ClientError.Statement.UnsupportedAdministrationCommand	This administration command is not supported.

Status Code	Description
<code>Neo.ClientError.Transaction.ForbiddenDueToTransactionType</code>	The transaction is of the wrong type to service the request. For instance, a transaction that has had schema modifications performed in it cannot be used to subsequently perform data operations, and vice versa.
<code>Neo.ClientError.Transaction.InvalidBookmark</code>	Supplied bookmark cannot be interpreted. You should only supply a bookmark that was previously generated by Neo4j. Maybe you have generated your own bookmark, or modified a bookmark since it was generated by Neo4j.
<code>Neo.ClientError.Transaction.InvalidBookmarkMixture</code>	Mixing bookmarks generated by different databases is forbidden. You should only chain bookmarks that are generated from the same database. You may however chain bookmarks generated from system database with bookmarks from another database.
<code>Neo.ClientError.Transaction.TransactionAccessedConcurrently</code>	There were concurrent requests accessing the same transaction, which is not allowed.
<code>Neo.ClientError.Transaction.TransactionHookFailed</code>	Transaction hook failure.
<code>Neo.ClientError.Transaction.TransactionMarkedAsFailed</code>	Transaction was marked as both successful and failed. Failure takes precedence and so this transaction was rolled back although it may have looked like it was going to be committed.
<code>Neo.ClientError.Transaction.TransactionNotFound</code>	The request referred to a transaction that does not exist.
<code>Neo.ClientError.Transaction.TransactionTimedOut</code>	The transaction has not completed within the specified timeout (<code>dbms.transaction.timeout</code>). You may want to retry with a longer timeout.
<code>Neo.ClientError.Transaction.TransactionValidationFailed</code>	Transaction changes did not pass validation checks.
<code>Neo.ClientNotification.Procedure.ProcedureWarning</code>	The query used a procedure that generated a warning.
<code>Neo.ClientNotification.Statement.CartesianProductWarning</code>	This query builds a cartesian product between disconnected patterns.
<code>Neo.ClientNotification.Statement.DynamicPropertyWarning</code>	Queries using dynamic properties will use neither index seeks nor index scans for those properties.
<code>Neo.ClientNotification.Statement.EagerOperatorWarning</code>	The execution plan for this query contains the Eager operator, which forces all dependent data to be materialized in main memory before proceeding.

Status Code	Description
Neo.ClientNotification.Statement.ExhaustiveShortestPathWarning	Exhaustive shortest path has been planned for your query that means that shortest path graph algorithm might not be used to find the shortest path. Hence an exhaustive enumeration of all paths might be used in order to find the requested shortest path.
Neo.ClientNotification.Statement.ExperimentalFeature	This feature is experimental and should not be used in production systems.
Neo.ClientNotification.Statement.FeatureDeprecationWarning	This feature is deprecated and will be removed in future versions.
Neo.ClientNotification.Statement.JoinHintUnfulfillableWarning	The database was unable to plan a hinted join.
Neo.ClientNotification.Statement.MissingAlias	Missing alias in a RETURN clause in a CALL subquery.
Neo.ClientNotification.Statement.NoApplicableIndexWarning	Adding a schema index may speed up this query.
Neo.ClientNotification.Statement.RuntimeUnsupportedWarning	This query is not supported by the chosen runtime.
Neo.ClientNotification.Statement.SuboptimalIndexForWildcardQuery	Index cannot execute wildcard query efficiently.
Neo.ClientNotification.Statement.SubqueryVariableShadowingWarning	Variable in subquery is shadowing a variable with the same name from the outer scope.
Neo.ClientNotification.Statement.UnboundedVariableLengthPatternWarning	The provided pattern is unbounded, consider adding an upper limit to the number of node hops.
Neo.ClientNotification.Statement.UnknownLabelWarning	The provided label is not in the database.
Neo.ClientNotification.Statement.UnknownPropertyKeyWarning	The provided property key is not in the database.
Neo.ClientNotification.Statement.UnknownRelationshipTypeWarning	The provided relationship type is not in the database.
Neo.DatabaseError.Database.DatabaseLimitReached	The limit to number of databases has been reached.
Neo.DatabaseError.Database.UnableToStartDatabase	Unable to start database.
Neo.DatabaseError.Database.Unknown	Unknown database management error.
Neo.DatabaseError.Fabric.RemoteExecutionFailed	The database was unable to execute a remote part of the statement.
Neo.DatabaseError.General.IndexCorruptionDetected	The request (directly or indirectly) referred to an index that is in a failed state. The index needs to be dropped and recreated manually.

Status Code	Description
Neo.DatabaseError.General.SchemaCorruptionDetected	A malformed schema rule was encountered. Please contact your support representative.
Neo.DatabaseError.General.StorageDamageDetected	Expected set of files not found on disk. Please restore from backup.
Neo.DatabaseError.General.UnknownError	An unknown error occurred.
Neo.DatabaseError.Schema.ConstraintCreationFailed	Creating a requested constraint failed.
Neo.DatabaseError.Schema.ConstraintDropFailed	The database failed to drop a requested constraint.
Neo.DatabaseError.Schema.IndexCreationFailed	Failed to create an index.
Neo.DatabaseError.Schema.IndexDropFailed	The database failed to drop a requested index.
Neo.DatabaseError.Schema.LabelAccessFailed	The request accessed a label that did not exist.
Neo.DatabaseError.Schema.PropertyKeyAccessFailed	The request accessed a property that does not exist.
Neo.DatabaseError.Schema.RelationshipTypeAccessFailed	The request accessed a relationship type that does not exist.
Neo.DatabaseError.Schema.SchemaRuleAccessFailed	The request referred to a schema rule that does not exist.
Neo.DatabaseError.Schema.SchemaRuleDuplicateFound	The request referred to a schema rule that is defined multiple times.
Neo.DatabaseError.Schema.TokenLimitReached	The maximum number of tokens of this type has been reached, no more tokens of this type can be created.
Neo.DatabaseError.Statement.CodeGenerationFailed	The database was unable to generate code for the query. A stacktrace can be found in the <code>debug.log</code> .
Neo.DatabaseError.Statement.ExecutionFailed	The database was unable to execute the statement.
Neo.DatabaseError.Statement.RemoteExecutionFailed	The database was unable to execute a remote part of the statement.
Neo.DatabaseError.Transaction.LinkedTransactionError	The transaction was terminated because another transaction executing the same query encountered an error.
Neo.DatabaseError.Transaction.TransactionCommitFailed	The database was unable to commit the transaction.
Neo.DatabaseError.Transaction.TransactionLogError	The database was unable to write transaction to log.
Neo.DatabaseError.Transaction.TransactionRollbackFailed	The database was unable to roll back the transaction.
Neo.DatabaseError.Transaction.TransactionStartFailed	The database was unable to start the transaction.
Neo.TransientError.Cluster.ReplicationFailure	Replication failure.

Status Code	Description
Neo.TransientError.Database.DatabaseUnavailable	The database is not currently available to serve your request, refer to the database logs for more details. Retrying your request at a later time may succeed.
Neo.TransientError.General.MemoryPoolOutOfMemoryError	The memory pool limit was exceeded. The corresponding setting can be found in the error message.
Neo.TransientError.General.OutOfMemoryError	There is not enough memory to perform the current task. Please try increasing <code>dbms.memory.heap.max_size</code> in the neo4j configuration (normally in <code>conf/neo4j.conf</code> or, if you are using Neo4j Desktop, found through the user interface) or if you are running an embedded installation increase the heap by using <code>-Xmx</code> command line flag, and then restart the database.
Neo.TransientError.General.StackOverflowError	There is not enough stack size to perform the current task. This is generally considered to be a database error, so please contact Neo4j support. You could try increasing the stack size: for example to set the stack size to <code>2M</code> , add <code>dbms.jvm.additional=-Xss2M</code> to in the neo4j configuration (normally in <code>conf/neo4j.conf</code> or, if you are using Neo4j Desktop, found through the user interface) or if you are running an embedded installation just add <code>-Xss2M</code> as command line flag.
Neo.TransientError.General.TransactionMemoryLimit	There is not enough memory to perform the current task. Please try increasing <code>dbms.memory.off_heap.max_size</code> in the neo4j configuration (normally in <code>conf/neo4j.conf</code> or, if you are using Neo4j Desktop, found through the user interface), and then restart the database.
Neo.TransientError.Request.NoThreadsAvailable	There are no available threads to serve this request at the moment. You can retry at a later time or consider increasing max thread pool size for bolt connector(s).
Neo.TransientError.Security.AuthProviderFailed	An auth provider request failed.
Neo.TransientError.Security.AuthProviderTimeout	An auth provider request timed out.
Neo.TransientError.Security.ModifiedConcurrently	The user was modified concurrently to this request.
Neo.TransientError.Statement.ExecutionTimeout	The database was unable to execute the statement in a timely fashion.
Neo.TransientError.Transaction.BookmarkTimeout	Bookmark wait timed out. Database has not reached the specified version.

Status Code	Description
Neo.TransientError.Transaction.ConstraintsChanged	Database constraints changed since the start of this transaction.
Neo.TransientError.Transaction.DeadlockDetected	This transaction, and at least one more transaction, has acquired locks in a way that it will wait indefinitely, and the database has aborted it. Retrying this transaction will most likely be successful.
Neo.TransientError.Transaction.Interrupted	Interrupted while waiting.
Neo.TransientError.Transaction.LeaseExpired	The lease under which this transaction was started is no longer valid.
Neo.TransientError.Transaction.LockAcquisitionTimeout	Unable to acquire lock within configured timeout (<code>dbms.lock.acquisition.timeout</code>).
Neo.TransientError.Transaction.LockClientStopped	The transaction has been terminated, so no more locks can be acquired. This can occur because the transaction ran longer than the configured transaction timeout, or because a human operator manually terminated the transaction, or because the database is shutting down.
Neo.TransientError.Transaction.MaximumTransactionLimit Reached	Unable to start new transaction since the maximum number of concurrently executing transactions is reached (<code>dbms.transaction.concurrent.maximum</code>). You can retry at a later time or consider increasing allowed maximum of concurrent transactions.
Neo.TransientError.Transaction.Outdated	Transaction has seen state which has been invalidated by applied updates while transaction was active. Transaction may succeed if retried.
Neo.TransientError.Transaction.Terminated	Explicitly terminated by the user.
Neo.TransientError.Transaction.TransientTransactionFailure	Unable to complete transaction.

Neo4j version changes

Neo4j 4.4

New:

```
Neo.ClientError.Statement.UnsupportedAdministrationCommand  
Neo.DatabaseError.Transaction.LinkedTransactionError
```

Neo4j 4.3

New:

```
Neo.ClientError.General.UpgradeRequired  
Neo.TransientError.Statement.ExecutionTimeout
```

Neo4j 4.2

New:

```
Neo.ClientNotification.Statement.MissingAlias  
Neo.ClientNotification.Statement.SubqueryVariableShadowingWarning  
Neo.TransientError.Transaction.TransientTransactionFailure
```

Neo4j 4.1

New:

```
Neo.ClientError.Cluster.Routing  
Neo.ClientError.General.TransactionOutOfMemoryError  
Neo.ClientError.Statement.AccessMode  
Neo.DatabaseError.Statement.RemoteExecutionFailed  
Neo.TransientError.General.MemoryPoolOutOfMemoryError
```

Removed:

```
Neo.ClientError.Cluster.TransactionSizeExceedsLimit  
Neo.DatabaseError.Cluster.SerializationFailure  
Neo.TransientError.General.TransactionOutOfMemoryError
```

Neo4j 4.0

New:

```
Neo.ClientError.Cluster.TransactionSizeExceedsLimit  
Neo.ClientError.Database.DatabaseNotFound  
Neo.ClientError.Database.ExistingDatabaseFound  
Neo.ClientError.Fabric.AccessMode
```

```
Neo.ClientError.Schema.ConstraintViolation
Neo.ClientError.Schema.ConstraintWithNameAlreadyExists
Neo.ClientError.Schema.EquivalentSchemaRuleAlreadyExists
Neo.ClientError.Schema.IndexMultipleFound
Neo.ClientError.Schema.IndexWithNameAlreadyExists
Neo.ClientError.Statement.NotSystemDatabaseError
Neo.ClientError.Statement.RuntimeUnsupportedError
Neo.ClientError.Transaction.InvalidBookmarkMixture
Neo.DatabaseError.Cluster.SerializationFailure
Neo.DatabaseError.Database.DatabaseLimitReached
Neo.DatabaseError.Database.UnableToStartDatabase
Neo.DatabaseError.Database.Unknown
Neo.DatabaseError.Fabric.RemoteExecutionFailed
Neo.DatabaseError.Schema.TokenLimitReached
Neo.DatabaseError.Statement.CodeGenerationFailed
Neo.TransientError.Database.DatabaseUnavailable
Neo.TransientError.General.TransactionMemoryLimit
Neo.TransientError.General.TransactionOutOfMemoryError
Neo.TransientError.Transaction.BookmarkTimeout
Neo.TransientError.Transaction.LeaseExpired
Neo.TransientError.Transaction.MaximumTransactionLimitReached
```

Removed:

```
Neo.ClientError.LegacyIndex.LegacyIndexNotFound
Neo.ClientError.Request.TransactionRequired
Neo.ClientError.Schema.ConstraintVerificationFailed
Neo.ClientError.Security.EncryptionRequired
Neo.ClientError.Statement.LabelNotFound
Neo.ClientNotification.Statement.CreateUniqueUnavailableWarning
Neo.ClientNotification.Statement.JoinHintUnsupportedWarning
Neo.ClientNotification.Statement.PlannerUnavailableWarning
Neo.ClientNotification.Statement.PlannerUnsupportedWarning
Neo.DatabaseError.Schema.LabelLimitReached
Neo.TransientError.Cluster.NoLeaderAvailable
Neo.TransientError.General.DatabaseUnavailable
Neo.TransientError.Network.CommunicationError
Neo.TransientError.Schema.SchemaModifiedConcurrently
Neo.TransientError.Transaction.InstanceStateChanged
Neo.TransientError.Transaction.LockSessionExpired
```

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