Neo4j Driver Documentation 1.0

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First Example

Example 1. Foo bar example

```
def test_can_run_simple_statement_from_bytes_string(self):
    session = GraphDatabase.driver("bolt://localhost").session()
    count = 0
    for record in session.run(b"RETURN 1 AS n"):
        assert record[0] == 1
        assert record["n"] == 1
        assert record.n == 1
        assert repr(record)
```

```
String text = "MATCH (n) RETURN n";

// when
Statement statement = new Statement( text, NO_PARAMETERS );
```

```
var neo4j = require('neo4j');

var statement = ['MERGE (alice:Person {name:{name_a},age:{age_a}})',
  'MERGE (bob:Person {name:{name_b},age:{age_b}})',
  'CREATE UNIQUE (alice)-[alice_knows_bob:KNOWS]->(bob)',
  'RETURN alice, bob, alice_knows_bob'
];

var params = {
  name_a: 'Alice',
  age_a: 33,
  name_b: 'Bob',
  age_b: 44
};

var driver = neo4j.driver("bolt://localhost");

var streamSession = driver.session();
var streamResult = streamSession.run(statement.join(' '), params);
streamResult.subscribe({
  onNext: function(record) {
    // On receipt of RECORD
    for(var i in record) {
      console.log(i);
      console.log(record[i]);
```

```
    }
  }, onCompleted: function() {
    var summary = streamResult.summarize();
    //Print number of nodes created
    console.log('');
    console.log(summary.updateStatistics.nodesCreated());
    streamSession.close();
  }, onError: function(error) {
    console.log(error);
  }
});

var promiseSession = driver.session();
var promiseResult = promiseSession.run(statement.join(' '), params);
promiseResult.then(function(records) {
  records.forEach(function(record) {
    for(var i in record) {
      console.log(i);
      console.log(record[i]);
    }
  });
  var summary = promiseResult.summarize();
  //Print number of nodes created
  console.log('');
  console.log(summary.updateStatistics.nodesCreated());
})
.catch(function(error) {
  console.log(error);
})
.then(function(){
  promiseSession.close();
});
```

Driver

Some may argue that the opposite of Uniform Drivers is Casual Drivers, or even Naked Drivers. This is of course preposterous. The opposite and complement of Uniform Drivers is Uniform Passengers, as should be obvious to anyone upon serious reflection. A valiant case has been made by the Dry Cleaner's guild that, as two negatives cancel out, the true opposite is Iform Drivers. Needless to say, this frivolous play on words was uniformly frowned upon by the rest of the community.

Configuration

1. an arrangement of parts or elements in a particular form, figure, or combination: *the unrepeatable*

configuration of the stars at the moment of your birth | the broad configuration of the economy remains capitalist.

- `Computing` the arrangement or set-up of the hardware and software that make up a computer system. *the PC comes with a removable hard disk drive as part of the standard configuration.*
- `Chemistry` the fixed three-dimensional relationship of the atoms in a molecule, defined by the bonds between them. Compare with CONFORMATION.

2. `Psychology` another term for GESTALT.

Construction

His accent serenades me and presses at the door
Broken promise to be around for my mind war
And my accomplishment's interrogating me
Today's become tomorrow before I wanted it to be
And desperate discussions
The start of the destruction
Our sign, in my mind
I'll be fine
I'll be fine

'Cause I'm under construction everyone
So you'll have to mind the mess
I'm under some construction

I always had to try harder, I never really could keep up
Sitting in the corner with my illness and bad luck
But in this humble place I'm feeling like red wine
And I hope to get better with some time
I'll be fine
With some time
I'll be fine

'Cause I'm under construction everyone
So you'll have to mind the mess
I'm under some construction

> Construction
> Modification
> Motivation
> Of construction
>
> And the rituals that soothe and disgust me will be gone
> With some time
> I'll be fine
> With some time
> I'll be fine
> I'll be fine
>
> I'm under construction everyone
> So you'll have to mind the mess
> I'm under some construction
> I'm under construction everyone
> So you'll have to mind the mess
> I'm under some construction
> Under construction
> Construction
> Feel better with some construction
>
> — No Doubt, Construction Deconstruction @ Everything In Time

Dependencies

Please import them. Also, include them.

Lifecycle

```
usage: mvn [options] [<goal(s)>] [<phase(s)>]

Options:
 -am,--also-make                       If project list is specified, also
                                       build projects required by the
                                       list
 -amd,--also-make-dependents           If project list is specified, also
                                       build projects that depend on
                                       projects on the list
```

```
-B,--batch-mode                          Run in non-interactive (batch)
                                         mode
-b,--builder <arg>                       The id of the build strategy to
                                         use.
-C,--strict-checksums                    Fail the build if checksums don't
                                         match
-c,--lax-checksums                       Warn if checksums don't match
-cpu,--check-plugin-updates              Ineffective, only kept for
                                         backward compatibility
-D,--define <arg>                        Define a system property
-e,--errors                              Produce execution error messages
-emp,--encrypt-master-password <arg>     Encrypt master security password
-ep,--encrypt-password <arg>             Encrypt server password
-f,--file <arg>                          Force the use of an alternate POM
                                         file (or directory with pom.xml).
-fae,--fail-at-end                       Only fail the build afterwards;
                                         allow all non-impacted builds to
                                         continue
-ff,--fail-fast                          Stop at first failure in
                                         reactorized builds
-fn,--fail-never                         NEVER fail the build, regardless
                                         of project result
-gs,--global-settings <arg>              Alternate path for the global
                                         settings file
-gt,--global-toolchains <arg>            Alternate path for the global
                                         toolchains file
-h,--help                                Display help information
-l,--log-file <arg>                      Log file to where all build output
                                         will go.
-llr,--legacy-local-repository           Use Maven 2 Legacy Local
                                         Repository behaviour, ie no use of
                                         _remote.repositories. Can also be
                                         activated by using
                                         -Dmaven.legacyLocalRepo=true
-N,--non-recursive                       Do not recurse into sub-projects
-npr,--no-plugin-registry                Ineffective, only kept for
                                         backward compatibility
-npu,--no-plugin-updates                 Ineffective, only kept for
                                         backward compatibility
-nsu,--no-snapshot-updates               Suppress SNAPSHOT updates
-o,--offline                             Work offline
-P,--activate-profiles <arg>             Comma-delimited list of profiles
                                         to activate
-pl,--projects <arg>                     Comma-delimited list of specified
                                         reactor projects to build instead
                                         of all projects. A project can be
                                         specified by [groupId]:artifactId
                                         or by its relative path.
```

```
  -q,--quiet                            Quiet output - only show errors
  -rf,--resume-from <arg>               Resume reactor from specified
                                        project
  -s,--settings <arg>                   Alternate path for the user
                                        settings file
  -T,--threads <arg>                    Thread count, for instance 2.0C
                                        where C is core multiplied
  -t,--toolchains <arg>                 Alternate path for the user
                                        toolchains file
  -U,--update-snapshots                 Forces a check for missing
                                        releases and updated snapshots on
                                        remote repositories
  -up,--update-plugins                  Ineffective, only kept for
                                        backward compatibility
  -V,--show-version                     Display version information
                                        WITHOUT stopping build
  -v,--version                          Display version information
  -X,--debug                            Produce execution debug output
```

SSL / TLS

Is it secret, is it safe?

URL Format

```
$url = trim($url, '!"#$%&\'()*+,-./@:;<=>[\\]^_`{|}~');
```

Version Mapping Table

Let’s map all the version tables.

Websockets

Put a websocket in it, will ya

Errors

Some things can go wrong. If that happens, null can be returned. Also, boolean can be returned false. There can also be FAILURE AKA ACK_FAILURE.

Example

```
MATCH (null)-[:merge]->(true)
with null.delete as foreach, `true`.false as null
return 2 + foreach, coalesce(null, 3.1415)
limit 10;
```

With this query, you can get error, even when you have 100 heap.

Getting Started

Ready, set, get, start!

Download

To dowload the driver do

Example 2. Foo bar example

```
pip install neo4j-driver
```

```
<dependencies>
    <dependency>
        <groupId>org.neo4j.driver</groupId>
        <artifactId>neo4j-java-driver</artifactId>
        <version>1.0-SNAPSHOT</version>
    </dependency>
</dependencies>

<repositories>
    <repository>
        <id>neo4j-snapshot-repository</id>
        <name>Neo4j Maven 2 snapshot repository</name>
        <url>http://m2.neo4j.org/content/repositories/snapshots</url>
        <snapshots>
            <enabled>true</enabled>
        </snapshots>
        <releases>
            <enabled>false</enabled>
        </releases>
    </repository>
</repositories>
```

```
var neo4j = require('lib/neo4j');
```

Setup

Yes, that's a good idea.

Versioning

Please see the other section about this.

Results

Hopefully, if you do it right, you will get results.

Concepts

'Concept' comes from the latin *concipio*, meaning 'I grasp'. Thus the same latin root gives us *to conceive*, meaning that act of the intellect whereby the soul is formally identical with a material substance, 'grasping it' through or under a 'concept', and the biological act of generating a new human being in the womb. It is rather poetic that the embryo of a child of the mind and of a child of the body share an etymological ancestry.

Record View

View the records.

Record Cursor

Curse the records.

Introspection

Too deep for me, I’m afraid.

Iteration

Rinse, repeat.

Plan + Profile

You can profile your queries and get the execution plan returned.

Reading Records

Usually I listen to them, but ok.

Utility Methods

```
class Ball extends Throwable {}

class P {

    P target;

    P (P target) {
        this.target = target;

    }

    void aim (Ball ball) {

        try {
            throw Ball;
        }
        catch (Ball b) {
            target.aim (b);
        }
    }

    public static void main (String[] args) {
        P parent = new P (null);
        P child = new P (parent);
        parent.target = child;
        parent.aim (new Ball ());
    }
}
```

Session

Therapy, we all need it.

Monitoring

You can monitor the network traffic. Connect your screen to your modem with a RGB cable.

Run Statement

Example 3. Foo bar example

```
def test_can_run_simple_statement_with_params(self):
    session = GraphDatabase.driver("bolt://localhost").session()
    count = 0
    for record in session.run("RETURN {x} AS n", {"x": {"abc": ["d", "e", "f"]}}):
        assert record[0] == {"abc": ["d", "e", "f"]}
        assert record["n"] == {"abc": ["d", "e", "f"]}
        assert repr(record)
        assert len(record) == 1
        count += 1
    session.close()
    assert count == 1
```

```
// when
Statement statement = new Statement( text, null );

// then
assertThat( statement.text(), equalTo( text ) );
assertThat( statement.parameters(), equalTo( NO_PARAMETERS ) );
```

```
    }
  });
  var summary = promiseResult.summarize();
  //Print number of nodes created
  console.log('');
  console.log(summary.updateStatistics.nodesCreated());
})
.catch(function(error) {
  console.log(error);
})
.then(function(){
  promiseSession.close();
});
```

Session State

One transaction, one result. We don't do pay-it-forward.

You can do parallell sessions, tho.

Syncing

Pipelining is related to syncing.

Transactions

State

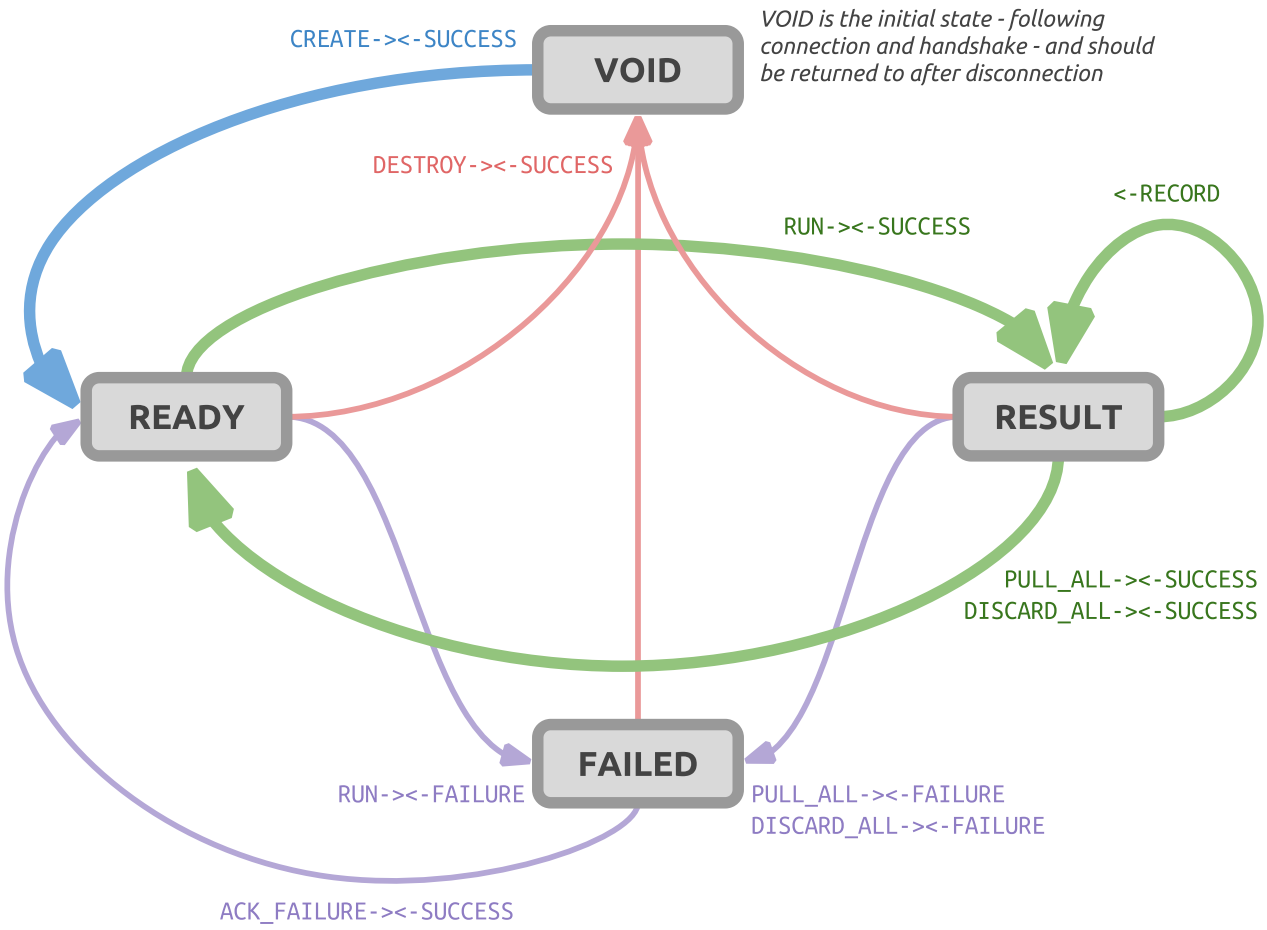

Figure 1. The state of the machine

Implicit Transcation

If you transact you will be implicated.

BEGIN, COMMIT, ROLLBACK

It's what they shout at Daft Punk concerts.

Nested Transactions

They are nice, but we don't do them yet. We probably should tell you how to deal with that.

Type Mapping

Example 4. Type mapping between the Neo4j public type system and them other languages

```
What are types?
```

```
Mmmmhhh..
```

```
Just minify and lint it and you should be fine.
```