

Video 2.7

Choosing a Database





In this Video, we are going to take a look at...

- Relational databases and document-oriented databases
- Scaling the database
- Integration with Node.js
- The winner



1x



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Relational Databases

- Store data in tables
- Enforce strict schemas at the database level
- Queried using SQL
- Proven to work for sites of all sizes



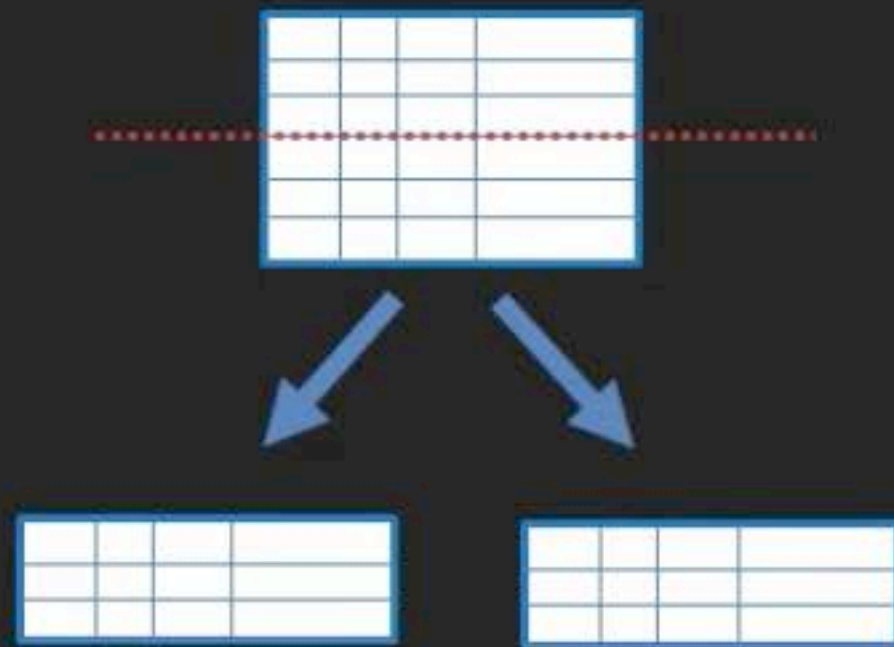
Document-Oriented Databases

- Store data in collections of documents
- Flexible schema for collecting aggregate data
- Queried using JSON
- Fast-growing and relatively new

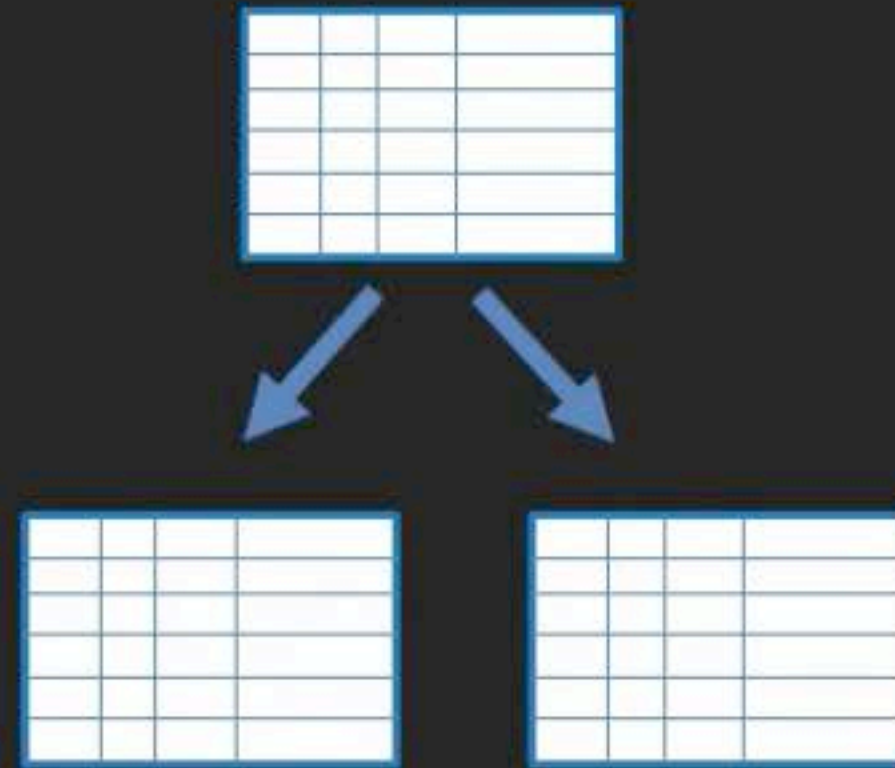


Scaling a Relational Database

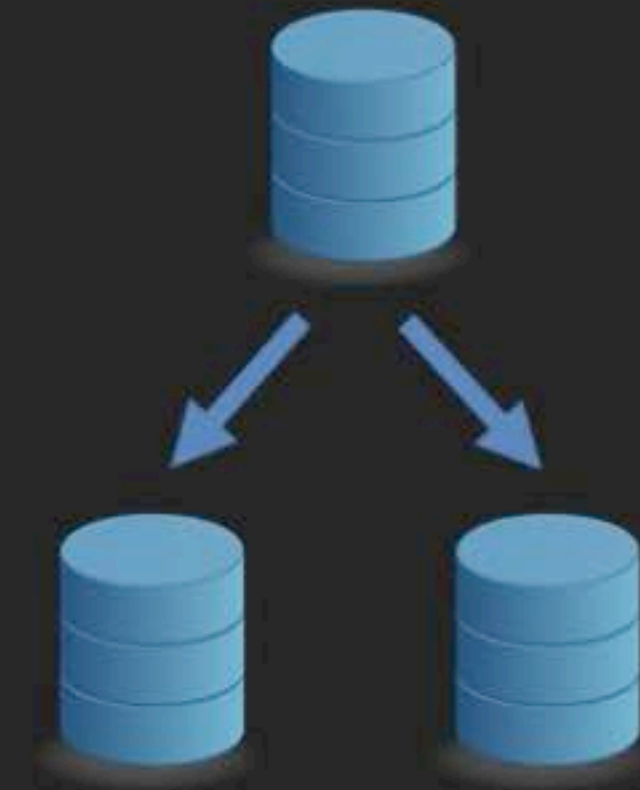
Sharding



Replication

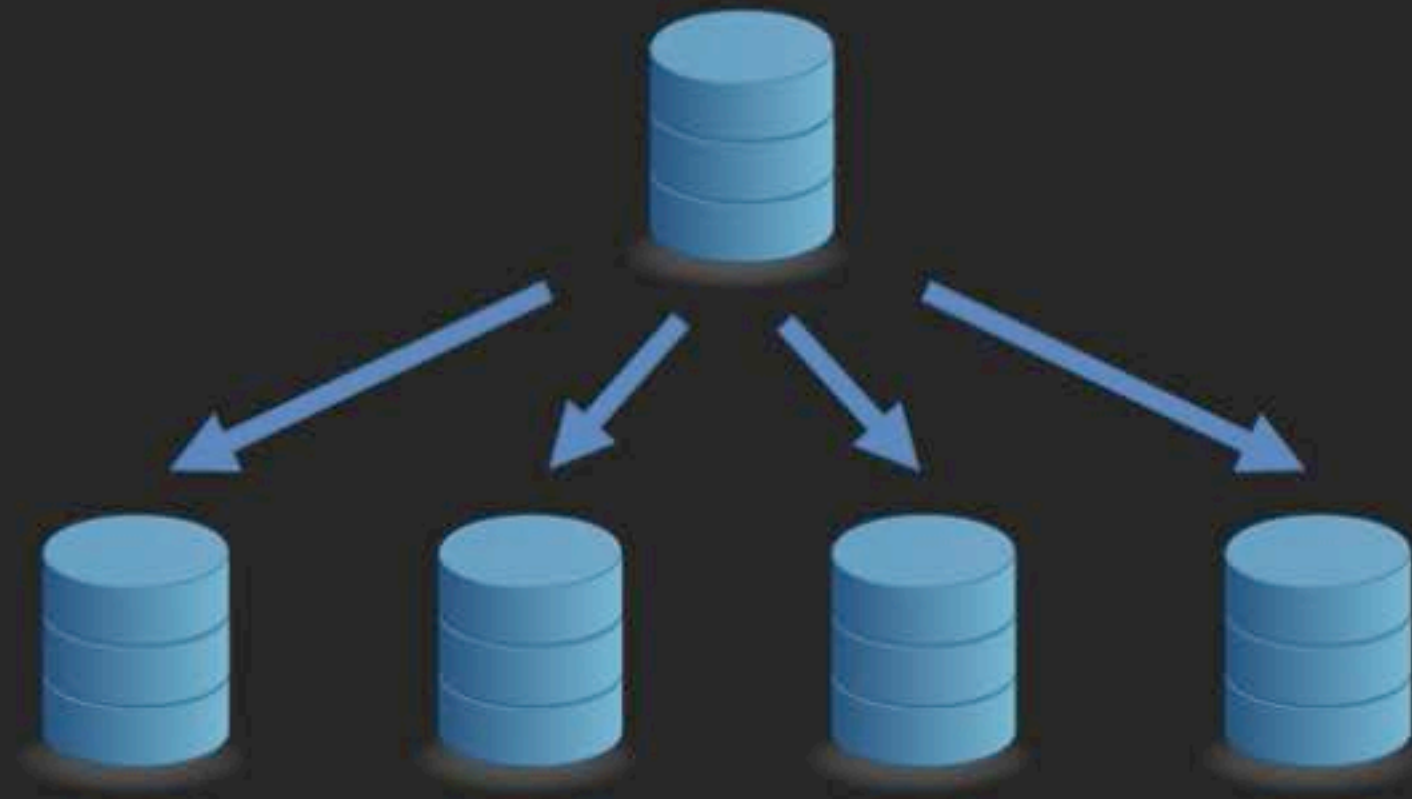


Partitioning



Scaling a Document-Oriented Database

Sharding



MySQL

Module: [mysql](#) Installation

```
$ npm install mysql
```

Example

```
var mysql = require('mysql')
var connection = mysql.createConnection({
  host: 'localhost',
  user: 'dbuser',
  password: 's3kre337'
})

connection.connect()

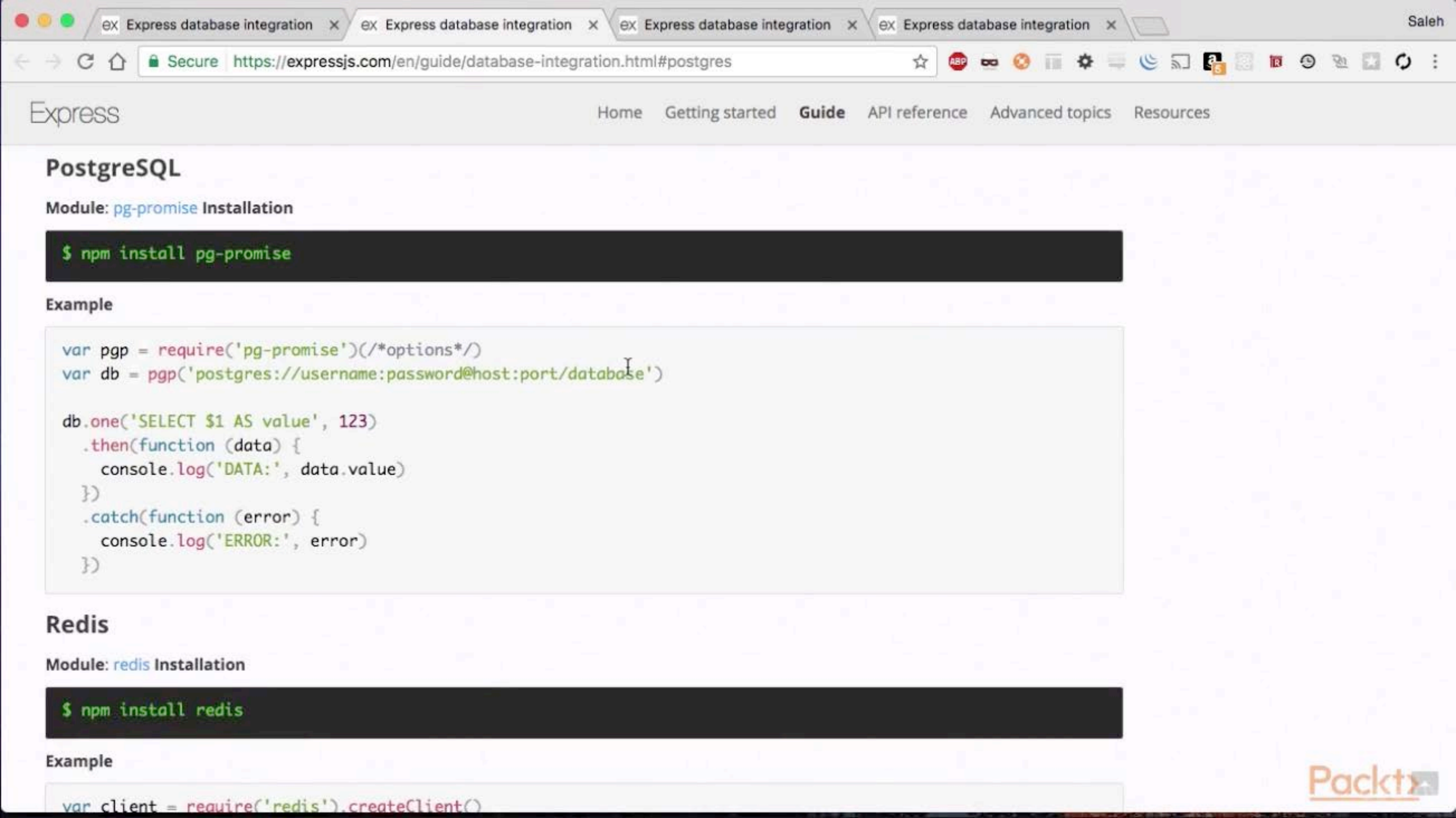
connection.query('SELECT 1 + 1 AS solution', function (err, rows, fields) {
  if (err) throw err

  console.log('The solution is: ', rows[0].solution)
})

connection.end()
```

MongoDB

Module: [mongodb](#) Installation



PostgreSQL

Module: [pg-promise](#) Installation

```
$ npm install pg-promise
```

Example

```
var pgp = require('pg-promise')(/*options*/)
var db = pgp('postgres://username:password@host:port/database')

db.one('SELECT $1 AS value', 123)
  .then(function (data) {
    console.log('DATA:', data.value)
  })
  .catch(function (error) {
    console.log('ERROR:', error)
  })
```

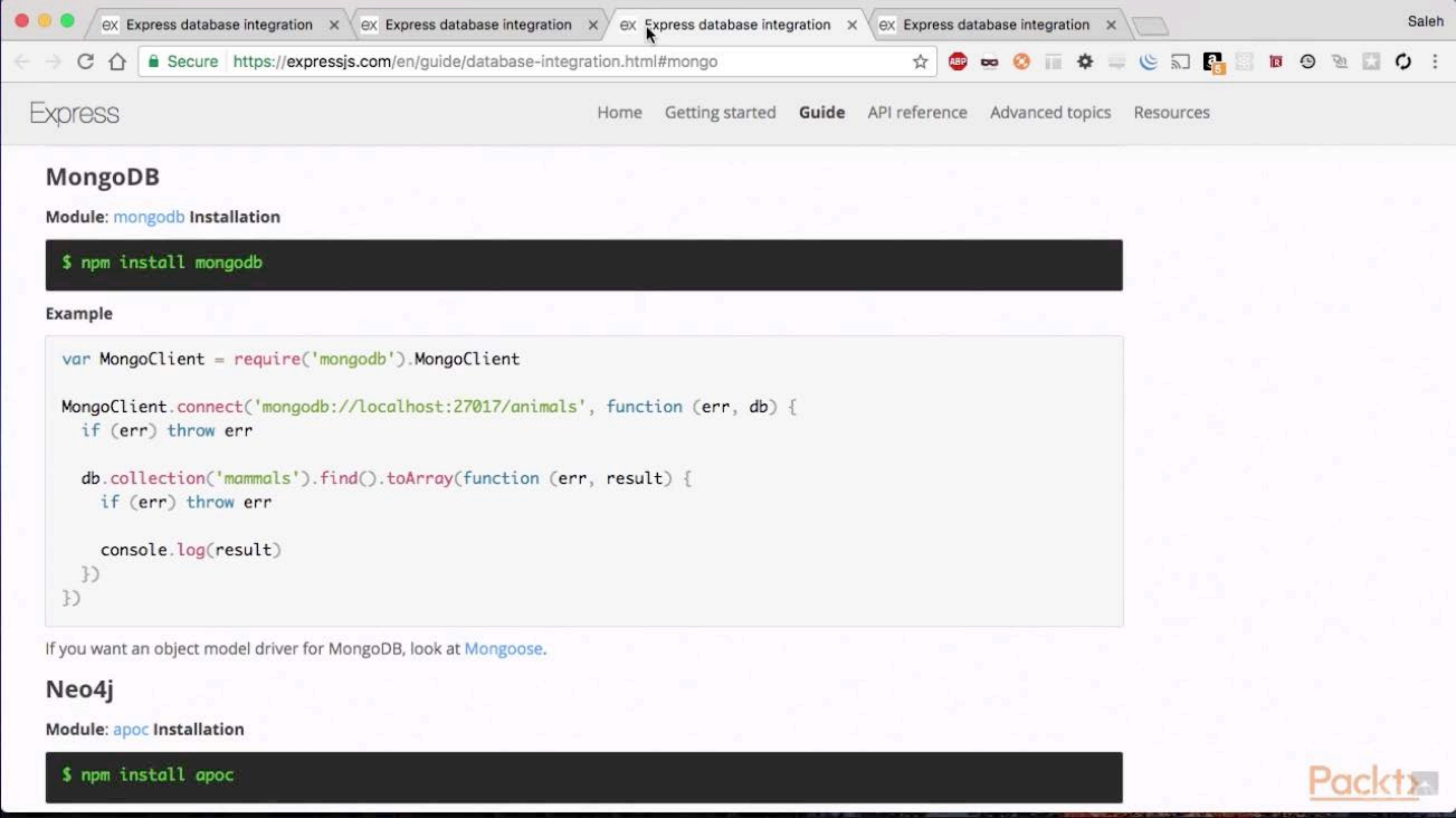
Redis

Module: [redis](#) Installation

```
$ npm install redis
```

Example

```
var client = require('redis').createClient()
```

MongoDB

Module: [mongodb](#) Installation

```
$ npm install mongodb
```

Example

```
var MongoClient = require('mongodb').MongoClient

MongoClient.connect('mongodb://localhost:27017/animals', function (err, db) {
  if (err) throw err

  db.collection('mammals').find().toArray(function (err, result) {
    if (err) throw err

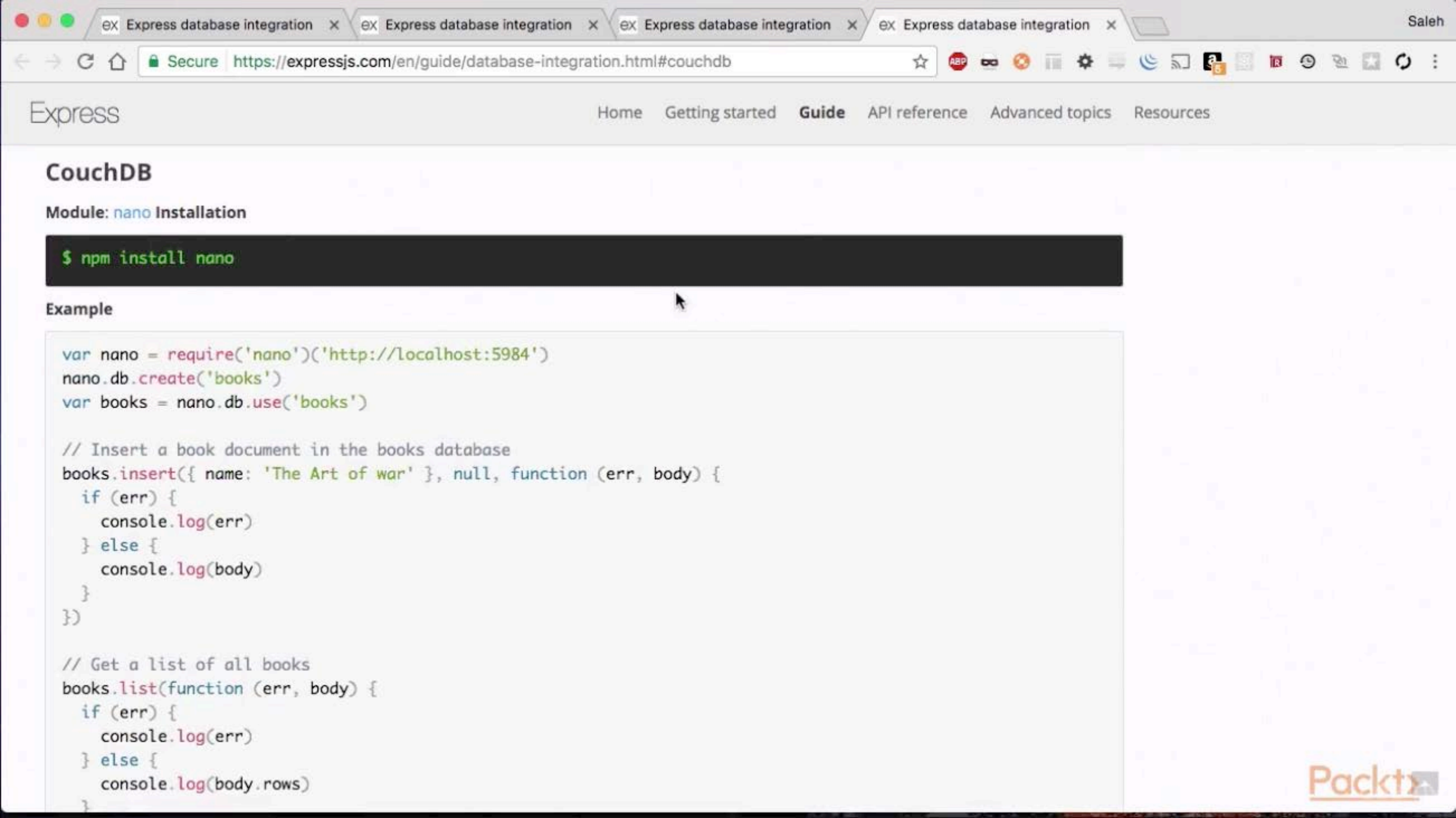
    console.log(result)
  })
})
```

If you want an object model driver for MongoDB, look at [Mongoose](#).

Neo4j

Module: [apoc](#) Installation

```
$ npm install apoc
```



CouchDB

Module: [nano](#) Installation

```
$ npm install nano
```

Example

```
var nano = require('nano')('http://localhost:5984')
nano.db.create('books')
var books = nano.db.use('books')

// Insert a book document in the books database
books.insert({ name: 'The Art of war' }, null, function (err, body) {
  if (err) {
    console.log(err)
  } else {
    console.log(body)
  }
})

// Get a list of all books
books.list(function (err, body) {
  if (err) {
    console.log(err)
  } else {
    console.log(body.rows)
  }
})
```

The Winner

- Integrates well with JavaScript
- Widely supported



Next Video

Saving Data in MongoDB