

Accessing Data with Node.js

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Agenda

- **Accessing Data with Node.js**

- How is Accessing Data Different in Node.js?
- Do I Have to Use NoSQL?
- Accessing SQL Server Data
- What is MongoDB?
- Installing MongoDB
- Storing Data in MongoDB
- Retrieving Data in MongoDB

DATA ACCESS IN NODE.JS

Is it different from ASP.NET?



NODE.JS

Like .NET, you need a driver for data stores

- Relational and NoSQL alike
- Lots of solutions...have to research your driver carefully
- Age of repo and activity level is a common approach
- Greenfield vs. Brownfield an issue
- Document databases and Node.js are the norm





DATA ACCESS IN NODE.JS IS TYPICALLY
WEAKLY TYPED

GIVE UP YOUR .NET PREJUDICES
ABOUT STRONGLY TYPED DATA
OBJECTS

“

Versioning and data schemas aren't the same thing. Don't assume you need data schemas if you need to version your API.

”

— Me

“DO I HAVE TO USE
NOSQL DATA STORES FOR
NODE.JS?”



DRIVERS FOR RELATIONAL DBs

Like .NET, you need a driver for data stores

- **massive-js**
 - **MySQL, PostgreSQL**
- **msnodesql**
 - **Native tds driver, but difficult to build on Windows**
- **tedious**
 - **Pure JavaScript SQL Server but limited functionality**
- **edge**
 - **ScriptCS and Node.js interop (to call any .NET code)**





demonstration

ACCESSING SQL SERVER

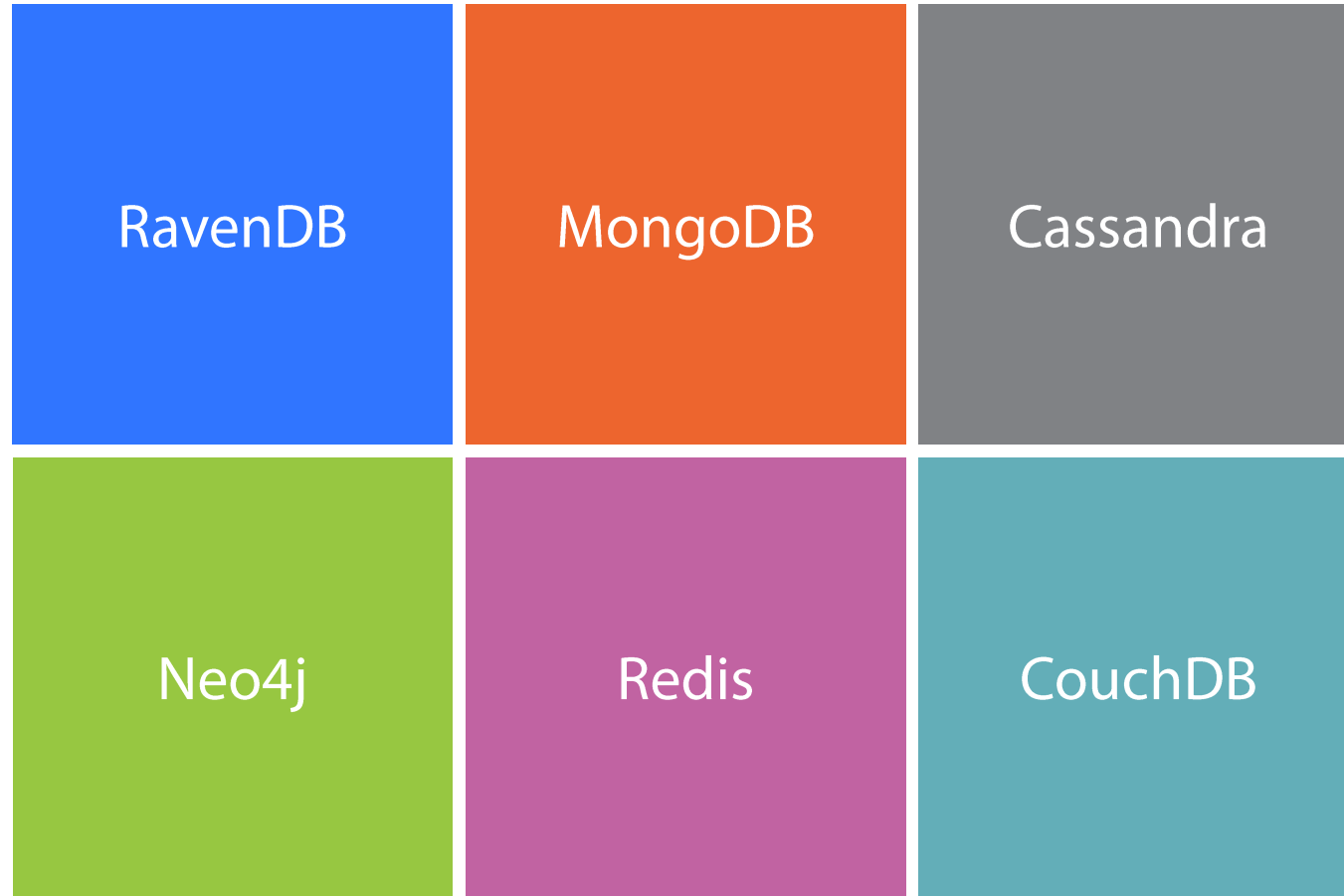
WHAT ARE NOSQL DATA STORES?

Why are they different to relational data stores?

- Document or data structure storage
- Hierarchies not relational
- Built to be run in parallel (e.g. Sharding)
- Simple to deploy (usually no installer)
- Recent ones support transactions too



NoSQL Databases*



** Lots of smaller players too if you don't like any of these!*



MONGODB IS THE MOST POPULAR, SO
LETS START THERE



demonstration

INSTALLING MONGODB



demonstration

ACCESSING MONGODB SERVER



demonstration

STORING DATA IN MONGODB



demonstration

RETRIEVING DATA IN MONGODB



demonstration

USING AN HTML FORM TO INSERT DATA

Summary

- **Accessing Data with Node.js**

- Like much of JavaScript coding, data access means giving up strong typing
- NoSQL data stores are a popular option with Node.js but you can still use relational data
- The SQL Server driver ecosystem is diverse, but not all options are easy
- MongoDB is very common in Node.js
- Installation of MongoDB is straightforward and very portable
- The choice of a MongoDB driver can substantially affect the style of Node.js code
- Understanding the nature of collections is key to storing data in MongoDB
- Querying MongoDB isn't based on SQL but is very achievable with the richness of the driver