Edge NodeJS

Fundamentals of NodeJS

Topics

Node.js

What is Node.js

Edge Node.js Runtime

Node.js Target Implementation

Node.js Deployment Considerations

When to Use Node.js within Edge

When Not to Use Node.js within Edge

Google Cloud

What is NodeJS?

Open source, cross platform runtime environment

For server-side networking applications

Written in JavaScript

For building fast, scalable network applications

Capable of handling a huge number of simultaneous connections with high throughput

> Single-threaded event engine
>
> Event-driven
>
> Non-blocking

Node package management

NPM is the package manager for Node.js

It is installed automatically with Node.js

Comes with a command line tool to manage packages

There are A LOT of packages for Node.js – community is very active.

Here is how to install postgres node.js driver

```
$ npm install pg
$ npm install —g pg
```

Google

Non-blocking JavaScript

```javascript
var result = database.query('select * from hugetable');
console.log(result);
console.log('hello');
```

VS

```javascript
database.query('select * from hugetable',
function(result) {
    console.log(result);
});
console.log('hello');
```

Non blocking JavaScript

```javascript
function countItems (el, callback) {
    setTimeout(function () {
        var test = document.getElementsByTagName(el);
        callback(test)
    }, 2000);

    alert('1');
}

countItems('li', function (test) {
    alert("There are " + test.length + " items");
});
```

Boomerang!

```
db.query(query, function(error, users) {
    if (!error) {
        db.query(query, function(error, posts) {
            if (!error) {
                db.query(query, function(error, comments) {
                    if (!error) {
                        console.log(comments);
                    } else {
                        // Handle error
                    }
                } else {
                    // Handle error
                }
            }
        } else {
            // Handle error
        }
    } else {
        // Handle error
    }
});
```

Boomerang!

There is a module for that

```javascript
var seq = require("seq");

seq().seq(function() {
    db.query(query, this);

}).seq(function(users) {
    db.query(query, this);

}).seq(function(posts) {
    db.query(query, this);

}).seq(function(comments) {
    console.log(comments);
    // Here, we'd probably call our callback
    // or just exit the program.

}).catch(function(error) {
    console.log(error);

});
```

Simple web server

```
$ node <filename>
```

Designing and building a RESTful NodeJS API

What is REST (and do you need one?)

Introduction to Express.js (open-source web
    application framework)

      A modern web application framework for
        Node.js

      Concept of "routes"

Creating an Express.js application

      Sending a response body with Express

      But, why is this better than using the
        built in HTTP module?

```
var express = require('express');
var app = express();

app.get('/', function(req, res){
    res.send('hello world');
});

app.listen(3000);
```

THANK YOU