

INTRO TO NODE.JS

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Node.js

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- A framework for creating high performance server-side web apps in JavaScript
- Asynchronous execution model facilitates scalability
- Supported platforms: Windows, Linux, macOS

Node.js Interesting Facts

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- ❑ Started in 2009 by Ryan Dahl
- ❑ Now sponsored by Node.js Foundation
- ❑ Used by IBM, Microsoft, Yahoo, Walmart, SAP, Paypal, GoDaddy, ...
- ❑ Runs on Google's V8 JavaScript Engine
 - ▣ Compiles JavaScript to native code at runtime



Node.js IDE Support

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- ❑ Eclipse (nodeclipse.org)
- ❑ WebStorm (JetBrains)
- ❑ Brackets (Adobe)
- ❑ Visual Studio Code (Microsoft)
- ❑ Cloud9

Hello, World in Node.js

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- Create a file (hello.js):
`console.log("Hello, world!");`
- Execute file:
`C:> node hello.js`

Command Line Node

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- Node predefines some JavaScript objects:
 - ▣ console – for logging
 - ▣ process – for accessing environment
- Example:
 - ▣ process.argv – array of command line arguments
 - ▣ process.env – a map of environment variables

```
console.log(process.env.PATH);
```

Node.js Interpreter

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- Invoke node without arguments to enter interpreter:

C:> node

Node.js Module System

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- Node.js standard library organized into modules
- Use `require()` to use code in modules

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


Using a Module

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```
var fs = require("fs");
```



```
data = fs.readFileSync('/etc/passwd', 'utf8');
```

- The object returned from `require()` is used to invoke functions defined in the module

Example

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- `examples/nodejs/readfile_sync.js`