

En-lighten Technology Ltd

Introduction to JavaScript ES6 and Load Testing with K6: Hands-On

Overview

This course is in two sections. The first part covers the main features of ES6. The second part introduces the K6 load test framework and how it can be used to write load tests using JavaScript. The aim is to provide a quick start to enable developers to begin using K6 immediately. The balance of the course is that 1.5 days will cover ES6 and 0.5 days K6.

Attendees will learn how to

- Write ES6 scripts using the new language features
- Use arrow functions
- Write classes and use inheritance
- Structure code in modules
- Develop load tests using K6
- Generate skeleton tests from OpenAPI specifications

Audience and Recommended Background

This course is for developers so knowledge of a high-level programming language such as Java or Python is recommended. The basics of JavaScript such as iteration and decision making are not directly covered but example code will show these.

Course Approach

Taught material will be delivered in short sessions and will be followed by the opportunity to practice what has been taught and reflect on how to put it into practice.

Course Duration: 2 days

Course Content

Getting Started with ES6

- Overview of ES6
- Goals of ES6
- Tool support

Core Features in ES6

- Variables, scope, and string literals
- Function enhancements
- Arrow functions

Destructuring

- What is destructuring
- Array destructuring

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- Object destructuring
- Destructuring techniques

Miscellaneous New APIs

- Number and Math enhancements
- String enhancements
- Regular expression enhancements

Array Enhancements

- Core Array enhancements
- Typed arrays

Object Enhancements

- Object literal enhancements
- Symbols
- New methods in Object

Classes

- Defining classes in ES6
- Encapsulation
- Statics
- Inheritance

Iterables, Iterators, and Generators

- Introduction to iterables and iterators
- Implementing iterable objects
- Generators

ES6 Modules

- Introduction to ES6 modules
- Importing and exporting syntax
- Additional techniques

Asynchronous JavaScript

- Introduction to Promises
- Using Promise objects
- Example of Promises

Introduction to K6

- What is K6?
- K6 load test types
- Test lifecycle and structure
- An example test
- Executing K6 scripts
- Stages and thresholds
- Generating tests from OpenAPI specifications
- KPIs and SLOs