## Docker Networking and Service Discovery

by Michael Hausenblas



## **Table of Contents**

|    | Preface   | ٠. ١ |
|----|---|------|
| 1. | Motivation  | . 9  |
|    | Go Cattle!  | 10   |
|    | The Docker Networking and Service Discovery Stack | 10   |
| 2. | Containers and Networking                         | . 13 |
|    | Docker Networking 101                             | 15   |
|    | Docker Multi-Host Networking                      | 20   |
| 3. | Containers and Service Discovery                  | . 25 |
|    | The Challenge                                     | 25   |
|    | Technologies                                      | 27   |
|    | Wrapping It Up                                    | 32   |
| 4. | Containers and Orchestration                      | 35   |
|    | What Does A Scheduler Actually Do?                | 36   |
|    | Vanilla Docker and Docker Swarm                   | 37   |
|    | Kubernetes  | 39   |
|    | Apache Mesos                                      | 41   |
|    | Hashicorp Nomad                                   | 43   |
|    | Which One Should I Use?                           | 44   |
| 5. | And now?  | 49   |
|    | References  | 49   |
|    | Acknowledgements                                  | 50   |

| About the Author | 51 |
|------------------|----|
| Index            | 53 |