Part 2. Building virtual infrastructure consisting of computers and networking

Computing power and network connectivity have become a basic need for private households, medium-sized enterprises, and big corporations. Operating hardware in data centers that are in-house or outsourced has covered these needs in the past. Now the cloud is revolutionizing the way you can access computing power.

Virtual machines can be started and stopped on demand to fulfill your computing needs within minutes. Being able to install software on virtual machines enables you to execute your computing tasks without needing to buy or rent hardware.

If you want to understand AWS, you have to dive into the possibilities of the API working behind the scenes. You can control every single service on AWS by sending requests to a REST API. Based on this, a variety of solutions can help you automate your overall infrastructure. Infrastructure automation is a big advantage of the cloud compared to hosting on-premises. This part will guide you into infrastructure orchestration and the automated deployment of applications.

Creating virtual networks allows you to build closed and secure network environments on AWS and to connect these networks with your home or corporate network.

Chapter 3 covers working with virtual machines. You will learn about the key concepts of the EC2 service.

Chapter 4 contains different approaches to automate your infrastructure. You will learn how to make use of Infrastructure as Code.

Chapter 5 is about networking. You will learn how to secure your system with a virtual private network and firewalls.

Chapter 6 is about a new way of computing: functions. You will learn how to automate operational tasks with AWS Lambda.