Chapter ONE INTRODUCTION

**Course Information**

# Course Introduction

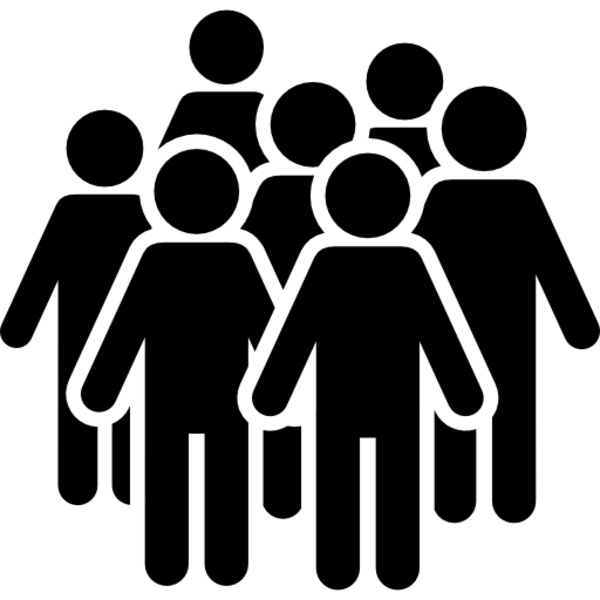
# Meet Your Instructor: Gourav Shah

**Gourav Shah** is a corporate trainer, author, consultant and course creator with deep expertise on topics such as implementing DevOps, SRE and containers technologies. Under the brand name of School of DevOps, he has trained professionals from leading corporations, including Walmart, Cisco, Mercedes, Adobe, GE, Schnider, Rakuten, Citrix, Ericsson, Visa, and many more.... In addition, he has touched the careers of more than 75k tech professionals from 140+ countries, who have subscribed to his video-based courses and has helped them get started with DevOps technologies. He has a published book, and is a Linux Foundation course author. Gourav is actively involved in, organizes and speaks at local DevOps meetups and events. He has been running a Youtube channel on DevOps topics (School of DevOps) and recently has started hosting a podcast by the name of Being DevOps.

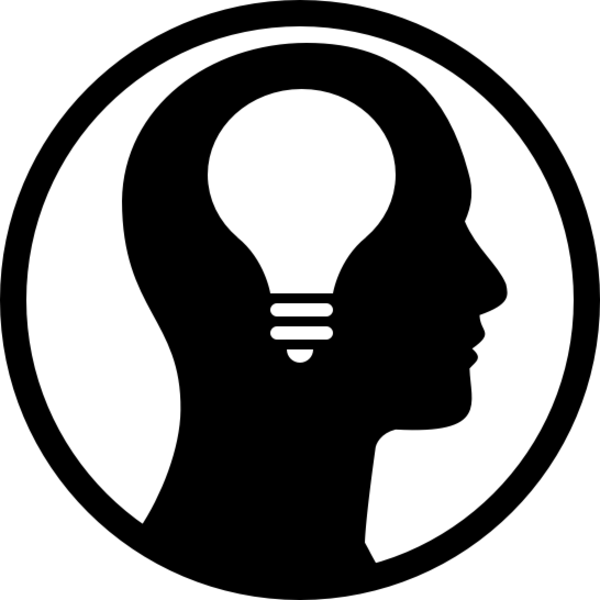
# Course Audience and Requirements

Click on each box to learn about the course audience, knowledge/skills requirements, software environment and lab environment.

**Audience & Requirements**



The course is designed for Software Developers, Quality Assurance Engineers, and anyone else looking to build a solid foundation on container technologies and understand the open container ecosystem as a whole.



* + Familiarity with development practices including continuous integration and revision control.
  + Understanding of cloud native/microservices applications.



Lab exercises in this course are done using the Google Cloud Platform. But they could be done using a hypervisor, with potentially additional modifications. If using a cloud provider like GCP, you should be able to complete the lab exercises using the free tier or credits provided to you. However, you may incur charges if you exceed the credits initially allocated by the cloud provider, or if the cloud provider’s terms and conditions change.

* + Minimum memory: 8GB
  + CPUs: 4
  + Core disk space: 10GB
  + Docker Desktop (comes with Kubernetes)
  + Internet connection

### INTRODUCTION

### Before You Begin

# Course Support

One great way to interact with peers taking this course is via the [Class Forum](https://forum.linuxfoundation.org/categories/lfd254-class-forum). The forum can be used in the following ways:

* To introduce yourself to other peers taking this course.
* To discuss concepts, tools and technologies presented in this course, or related to the topics discussed in the course materials.
* To ask questions or report issues with labs or course content.
* To share resources and ideas related to Docker.

The Class Forum will be reviewed periodically by the Linux Foundation staff, but it is primarily a community resource, not an 'ask the instructor' service.

If you have questions regarding your course enrollment, you can reach out to us via our [Customer Support system](http://trainingsupport.linuxfoundation.org/). You will be required to login with your LF Account, which will help us to quickly locate your account and respond to your request. This will also allow you to track your support request through to resolution, and create an ongoing record of your support requests.

The Linux Foundation Training & Certification Customer Support system also offers enhanced functionality, such as:

* Knowledge Base Articles - to help you find a quick response to your commonly asked questions
* Service Request Forms - asking the right questions so that you can get the right answers.

# Course Timing

This course is entirely self-paced; there is no fixed schedule for going through the material. You can go through the course at your own pace, and you will always be returned to exactly where you left off when you come back to start a new session. However, we still suggest you avoid long breaks in between periods of work, as learning will be faster and content retention improved.

**You have unlimited access to this course for 12 months from the date you registered, even after you have completed the course.**

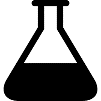
The chapters in the course have been designed to build on one another. It is probably best to work through them in sequence; if you skip or only skim some chapters quickly, you may find there are topics being discussed you have not been exposed to yet. But this is all self-paced, and you can always go back, so you can thread your own path through the material.

# Lab Exercises/Assessments

The labs and knowledge check questions are not graded.  
  
We would also like to emphasize that you will not be required to take a final exam to complete this course.

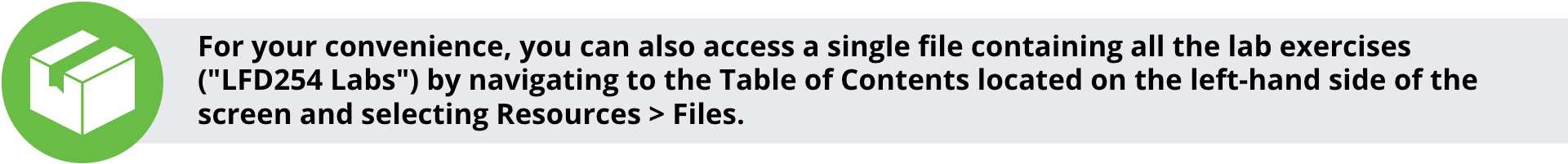
**Click on each box to learn about labs and knowledge checks.**

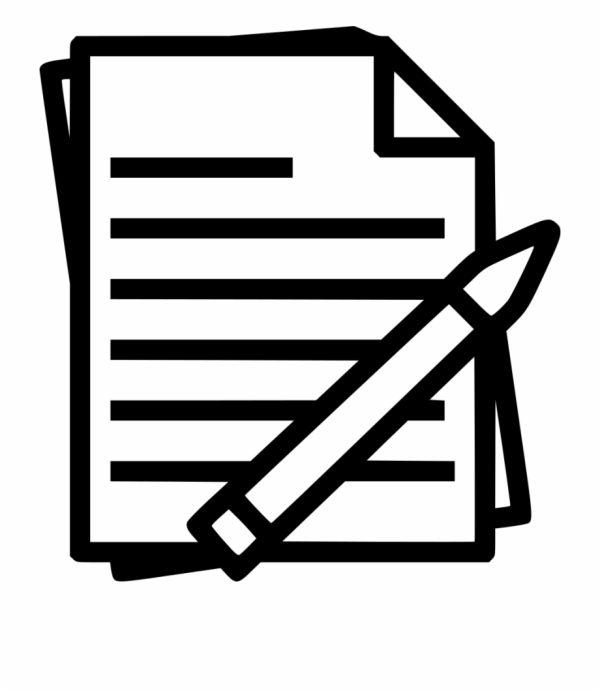
**Lab Exercises/Assessments**



In all The Linux Foundation courses (in any format) we put a heavy emphasis on learning by doing. In live, instructor-led classes, we almost always aim for a 50/50 balance between lecture and discussion, and working on laboratory exercises, or homework, that either perform the tasks just described in the class, or try more ambitious variations. Instructors help students figure out how to do things, debug their code and scripts, etc., during these lab sessions. Because this course is self-paced, without a live instructor, it will be up to you to control your time budget and make sure you take enough time to do labs.

You will find lab exercises located throughout the course.



* 

Close Knowledge Check

At the end of each chapter, you will also find a series of knowledge check questions. These questions, just like the labs, were designed with one main goal in mind: to help you better comprehend the course content and reinforce what you have learned.

# Course Formatting

In order to make it easier to distinguish the various types of content in the course, we use the color coding and formats below:

**Dark blue: Text typed at the command line**

**Green: Output**

**Black: File content**

**Brown: File/Directory names**

**Light blue: Hyperlink**

# Copyright

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# The Linux Foundation

[The Linux Foundation](https://www.linuxfoundation.org/) provides a neutral, trusted hub for developers to code, manage, and scale open technology projects. Founded in 2000, The Linux Foundation is supported by more than 1,000 members and is the world’s leading home for collaboration on open source software, open standards, open data and open hardware. The Linux Foundation’s methodology focuses on leveraging best practices and addressing the needs of contributors, users and solution providers to create sustainable models for open collaboration.

The Linux Foundation hosts Linux, the world's largest and most pervasive open source software project in history. It is also home to Linux creator Linus Torvalds and lead maintainer Greg Kroah-Hartman. The success of Linux has catalyzed growth in the open source community, demonstrating the commercial efficacy of open source and inspiring countless new projects across all industries and levels of the technology stack.

As a result, the Linux Foundation today hosts far more than Linux; it is the umbrella for many critical open source projects that power corporations today, spanning virtually all industry sectors. Some of the technologies we focus on include big data and analytics, networking, embedded systems and IoT, web tools, cloud computing, edge computing, automotive, security, blockchain, and many more.

# The Linux Foundation Events

Over 85,000 open source technologists and leaders worldwide gather at Linux Foundation events annually to share ideas, learn and collaborate. Linux Foundation events are the meeting place of choice for open source maintainers, developers, architects, infrastructure managers, and sysadmins and technologists leading open source program offices, and other critical leadership functions.

These events are the best place to gain visibility within the open source community quickly and advance open source development work by forming connections with the people evaluating and creating the next generation of technology. They provide a forum to share and gain knowledge, help organizations identify software trends early to inform future technology investments, connect employers with talent, and showcase technologies and services to influential open source professionals, media, and analysts around the globe.

The Linux Foundation hosts an increasing number of events each year, including:

* Open Source Summit North America, Europe, and Japan
* Embedded Linux Conference North America and Europe
* Open Networking & Edge Summit
* KubeCon + CloudNativeCon North America, Europe, and China
* Automotive Linux Summit
* KVM Forum
* Linux Storage Filesystem and Memory Management Summit
* Linux Security Summit North America and Europe
* Linux Kernel Maintainer Summit
* The Linux Foundation Member Summit
* Open Compliance Summit
* And many more.

You can learn more about the [Linux Foundation events](https://events.linuxfoundation.org/) online.

# Training Venues

The Linux Foundation's training is for the community, by the community, and features instructors and content straight from the leaders of the Linux developer community.

The Linux Foundation offers several types of training:

* Classroom
* Online
* On-site
* Events-based.

Attendees receive Linux and open source software training that is distribution-flexible, technically advanced and created with the actual leaders of the Linux and open source software development community themselves. The Linux Foundation courses give attendees the broad, foundational knowledge and networking needed to thrive in their careers today. With either online or in-person training, The Linux Foundation classes can keep you or your developers ahead of the curve on open source essentials.

# The Linux Foundation Training Offerings

Our current course offerings include:

* Linux Programming & Development Training
* Enterprise IT & Linux System Administration Courses
* Open Source Compliance Courses.

To get more information about specific courses offered by the Linux Foundation, including technical requirements and other logistics, visit the [Linux Foundation training](https://training.linuxfoundation.org/) website.

# The Linux Foundation Certifications

The [Linux Foundation certifications](https://training.linuxfoundation.org/certification-catalog/) give you a way to differentiate yourself in a job market that's hungry for your skills. We've taken a new, innovative approach to open source certification that allows you to showcase your skills in a way that other peers will respect and employers will trust:

* You can take your certification exam from any computer, anywhere, at any time.
* The certification exams are either performance-based​ or multiple choice.
* The exams are distribution-flexible.
* The exams are up-to-date, testing knowledge and skills that actually matter in today's IT environment.

# Training/Certification Firewall

The Linux Foundation has two separate training divisions: Course Delivery and Certification. These two divisions are separated by a **firewall**.

The curriculum development and maintenance division of the Linux Foundation Training department has no direct role in developing, administering, or grading certification exams.

Enforcing this self-imposed firewall ensures that independent organizations and companies can develop third party training material, geared towards helping test takers pass their certification exams.

Furthermore, it ensures that there are no secret "tips" (or secrets in general) that one needs to be familiar with in order to succeed.

It also permits the Linux Foundation to develop a very robust set of courses that do far more than teach the test, but rather equip attendees with a broad knowledge of the many areas they may be required to master to have a successful career in open source system administration.