

devon



# Certified DevOps Essentials

Brochure

Version 1.1



## REVISION HISTORY

| VERSION | DATE      | REMARKS                     |
|---------|-----------|-----------------------------|
| 1.0     | 31-Mar-21 | Initial Version             |
| 1.1     | 29-Apr-21 | Changed examination details |



## Contents

|   |                                     |
|---|-------------------------------------|
| REVISION HISTORY.....                                     | 1                                   |
| INTRODUCTION TO SYLLABUS.....                             | 3                                   |
| OVERVIEW.....   | 3                                   |
| EXAMINABLE LEARNING OBJECTIVES .....                      | 3                                   |
| EXAMINATION DETAILS.....                                  | 4                                   |
| MODULE 1: DEVSECOPS PRINCIPLES.....                       | <b>Error! Bookmark not defined.</b> |
| MODULE 2: EXPLORING SECURITY CHECKPOINTS.....             | <b>Error! Bookmark not defined.</b> |
| MODULE 3: EMBEDDING SECURITY IN SOFTWARE DELIVERY.....    | <b>Error! Bookmark not defined.</b> |
| MODULE 4: EMBEDDING SECURITY IN SOFTWARE OPERATIONS ..... | 5                                   |
| MODULE 5: COMPLIANCE AND GOVERNANCE IN DEVSECOPS.....     | <b>Error! Bookmark not defined.</b> |
| APPENDIX 1 - K- LEVELS EXPLANATION.....                   | 6                                   |
| ACKNOWLEDGEMENT .....                                     | 7                                   |



## INTRODUCTION TO SYLLABUS

### OVERVIEW

This 8 hours Certified DevOps Essentials course provides the basic knowledge that comes with DevOps. The term is widely used and often misunderstood. Following the course and passing the exam will help set the stage for organizational transformations in software development. This tool-agnostic course helps to understand the principles and practices used within DevOps adoption throughout the journey. It will also serve as a base for future Certified DevOps trainings.

### EXAMINABLE LEARNING OBJECTIVES

The Learning Objectives support knowledge about the basic principles and practices of DevOps and are used to create the examination for achieving the Certified DevOps Essentials. In general, all parts of this syllabus are examinable at a K1 and K2 level. That is, the candidate will recognize, remember, and recall a term or concept. The specific learning objectives at K1, K2, K3, K4 levels are shown at the beginning of the pertinent chapter.



## EXAMINATION DETAILS

|                                      |                           |
|--------------------------------------|---------------------------|
| Examination type                     | Multiple-choice questions |
| Number of questions                  | 40                        |
| Pass mark                            | 65%                       |
| Open book/notes                      | No                        |
| Electronic equipment/aides permitted | No                        |
| Time allotted for examination        | 60 Minutes                |



## MODULE 1: EXPLORING DEVOPS

- 1.1. (K1) Understanding what DevOps is
- 1.2. (K2) Understanding what DevOps is not
- 1.3. (K1) History of DevOps (CALMS, relationship to Agile / Lean / ITSM)
- 1.4. (K2) Understanding it starts with a vision

## MODULE 2: UNDERSTANDING DEVOPS PRINCIPLES

- 2.1. (K1) The three ways
- 2.2. (K1) The theory of constraints
- 2.3. (K2) Value Stream Mapping
- 2.4. (K2) Improvement Kata

## MODULE 3: UNDERSTANDING DEVOPS PRACTICES

- 3.1. (K1) Continuous Everything
- 3.2. (K1) Security
- 3.3. (K1) Architecture
- 3.4. (K1) Design & Programming
- 3.5. (K1) ChatOps

## MODULE 4: UNDERSTANDING TECHNOLOGY IMPACT

- 4.1. (K2) Understanding the levels, ways and considerations for automation
- 4.2. (K2) Applying DevOps metrics
- 4.3. (K2) Exploring DevOps tools



## APPENDIX 1 - K- LEVELS EXPLANATION

Source: "Writing Learning Objectives" prepared by Raoul A. Arreola, Ph.D., The University of Tennessee, Memphis.

### What is a Learning Objective?

A learning objective is a statement of what students will be able to do when they have completed instruction. A learning objective has three major components:

1. A description of what the student will be able to do
2. The conditions under which the student will perform the task
3. The criteria for evaluating student performance

### Cognitive Learning

*K1. Basic Knowledge:*

**To recall and memorize** - Assess by direct questions. The object is to test the students' ability to recall facts, to identify and repeat the information provided.

*Recall, identify, recognize, acquire, distinguish*

*K2. Comprehension:*

**To translate from one form to another** - Assess by having students'

- restate material in their own words,
- reorder or extrapolate ideas, predict or estimate.

Assessments must provide evidence that the students have some understanding or comprehension of what they are saying.

*Translate, extrapolate, convert, interpret, abstract, transform*

*K3. Application:*

**To apply or use information in a new situation** - Assess by presenting students with a unique situation (i.e., one not identical to that used during instruction) and have them apply their knowledge to solve the problem or execute the proper procedure.

*Apply, sequence, carry out, solve, prepare, operate, generalize, plan, repair, explain, recognize*

*K4. Analysis:*

**To examine a concept and break it down into its parts** - Assess by presenting students with a unique situation of the same type but not identical to that used during instruction, and have them analyze the situation and describe the appropriate procedure or solution to the problem.

*Analyze, estimate, compare, observe, detect, classify, discover, discriminate, identify, explore, distinguish, catalog, investigate, breakdown, order, determine*



*K5. Synthesis:*

**To put information together in a unique or novel way to solve a problem** – Assess by presenting students with a unique situation NOT of the same type used during instruction, and have them solve a problem by selecting and using appropriate information.

*Write, plan, integrate, formulate, propose, specify, produce, organize, theorize, design, build*

*K6. Evaluation:*

**To make quantitative or qualitative judgments using standards of the appraisal** - Assess by presenting the students with a situation which includes both a problem and a solution to the problem and have them justify or critique the solution.

*Evaluate, verify, assess, test, judge, rank, measure, appraise, select, check*

## ACKNOWLEDGEMENT

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*DEVON*

Markus van Duijn, Lead Consultant from DevOn

*ISQI*

Erika Paasche, Corinna Flemming – Vogt, and Christian Kinne



At DevOn, we believe that organizations need to radically improve their software development to stay ahead of the competition. We do not make step-by-step improvements, on the contrary, we implement innovative solutions that radically change software development for the better. We help organizations solve their impediments and move beyond traditional ways of work.

Moreover, with over fifteen years of experience with Distributed Agile Software Development, DevOn is a trusted partner of various organizations. Since 2004 we have been combining best practices in the field of Lean and Agile Software Development with our experience from Agile transformations. Our Agile Software Development Lab in India consists of self managing teams that deliver new functionalities every sprint, which are ready for production.

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