DASA

DASA® DEVOPS AGILE
SKILLS ASSOCIATION

DASA DevOps Fundamentals™

Syllabus

Version 3.1.0

SCOPE AND PURPOSE OF THIS DOCUMENT

The purpose of this document is to inform all parties interested in the DASA DevOps Fundamentals program of the areas covered in the program.

DASA DEVOPS FUNDAMENTALS

DASA DevOps Fundamentals aims to simultaneously build the organization, team, and individual capability for organizations beginning/undergoing a DevOps transformation. This 2-day program provides learners an extensive introduction to the core Agile DevOps principles and approach defined by DASA for building high-performance organizations. It covers all essential knowledge and skill competencies defined by DASA to ensure you acquire a solid knowledge of DevOps concepts and terminology.

DevOps Fundamentals is for every IT organization undergoing transformation to be up-to-date with the latest practices in DevOps and ensure a strong footing for a successful transformation. It is to prepare organizations for the DevOps mindset, which includes people, processes, and culture. It aligns the vocabulary and the concepts of DevOps among all the employees. It emphasizes the cultural aspects, keeping in mind that technology is only one part of the transformation framework. The future is arriving faster than ever, and DevOps Fundamentals helps organizations ride the wave into an exciting DevOps future.

With DevOps Fundamentals, organizations can ensure all employees get the foundational skills and knowledge required to embark on a DevOps transformation journey. From what DevOps is all about, its origin, and evolution, to the current best practices along the dimensions of management, processes, and technology, DevOps Fundamentals focuses on the philosophy, culture, and people dimensions that are key to a successful DevOps transformation.

During a transformation journey, it is crucial for everyone working in an organization that embraces DevOps principles to master the skills and competencies associated with DevOps. Just like a blacksmith knows exactly how to use a hammer and chisel, the DevOps professional knows how to work effectively in teams and how to leverage the DevOps automation platform. These journeys start with the DevOps Fundamentals, a starting point for building a career in DevOps.

QUALIFICATION OBJECTIVES

When you have acquired the required knowledge from this program, you will be able to:

◗ Participate successfully in the DevOps transformation within the organization by sharing a common understanding and vocabulary required for DevOps ways of working.

◗ Define and discuss the key concepts and principles of DevOps.

◗ Explain the core elements of a DevOps culture and its importance.

◗ Discuss the importance of automation and ways to implement it in the product life cycle.

◗ Describe how DevOps relates to Lean and Agile methodologies.

◗ Discuss metrics and success factors for DevOps transformations.

◗ Get insight into the various organizational DevOps models and related architectures.

◗ Explain the importance of sharing responsibility, knowledge and ways of working to enable successful collaboration.

◗ Identify the available resources of DASA guidance as an enabler of your DevOps implementation plan.

TARGET AUDIENCE

The DASA DevOps Fundamentals certification adds value to individuals involved in IT development, operations, or service management. It's target audience includes but is not limited to:

Development & Operations	Business & Leadership	Support & Enablement
◗ Software Developers, Engineers and Architects ◗ Quality Engineers and Testers ◗ System and Network Engineers and Administrators ◗ Automation Architects ◗ Dev, Sec & Ops Engineers ◗ Enterprise Architects ◗ Incident and Change Managers ◗ Integration Specialists	◗ Product Owners ◗ Business Analysts ◗ Business Managers ◗ Operations Managers ◗ Product Managers ◗ Team Leads ◗ Scrum Masters ◗ Agile Coaches ◗ Senior Management and C-Suite	◗ Support Engineers ◗ Service Managers ◗ Business users who are working with IT in getting business value created ◗ HR ◗ Finance ◗ Governance ◗ Legal

SYLLABUS AREAS

The following syllabus areas are identified.

SYLLABUS AREA CODE	SYLLABUS AREA TITLE
DC	Building DevOps Context
C	Culture
A	Automation
L	Lean
M	Measurement
S	Sharing
DG	DASA Guidance

SYLLABUS

In the following tables, the key aspects of the DASA DevOps Fundamentals Syllabus are described.

BUILDING DEVOPS CONTEXT

Syllabus Area Code: DC Syllabus Area Title: Building DevOps Context	
Topic	**Objectives**
Why DevOps?	◗ Explain the evolution of DevOps. ◗ Discuss the pitfalls of traditional ways of working in IT. ◗ Discuss the challenges in breaking down the "Wall of Confusion" between teams. ◗ Define the central idea and the business benefits of DevOps.
DevOps Definition	◗ Explain the Three Ways of DevOps: flow, feedback, and continuous learning and experimentation.
DASA DevOps Principles	◗ Explain the key DevOps principles defined by DASA.

CULTURE

Syllabus Area Code: C Syllabus Area Title: Culture	
Topic	**Objectives**
Introduction To DevOps Culture	◗ Describe the DevOps culture. ◗ Explain the core elements of a DevOps culture.
DevOps Culture For Teams	◗ Identify the important aspects of implementing a DevOps culture
DevOps Leadership	◗ Identify the role of leadership in a DevOps environment

AUTOMATION

Syllabus Area Code: A Syllabus Area Title: Automation	
Topic	**Objectives**
Why Automate?	◗ Explain the importance of automation to improve the production cycle for higher value and quality.
Automation Enables Continuous Delivery	◗ Describe the impact of automation on software delivery processes. ◗ State the key benefits of Continuous Delivery ◗ Explain the key principles of Continuous Delivery.
Modern Infrastructure & Cloud Computing	◗ Describe the role of modern infrastructure and cloud in the DevOps world.

LEAN

Syllabus Area Code: L Syllabus Area Title: Lean	
Topic	**Objectives**
Lean	◗ Explain the basic concepts of Lean methodology and its relation to DevOps
Agile	◗ Explain the basic concepts of Agile development and its relation to DevOps. ◗ Discuss the various values and principles of the Agile Manifesto.
Product Management	◗ Explain the need for DevOps organizations to be product-centric rather than project-centric
Service Management	◗ Explain the basic concepts of ITSM and its relation to DevOps.
Site Reliability Engineering	◗ Identify the key concepts and practices in SRE
Value & Experience Management	◗ Explain the principles of Value Management in a Lean DevOps context.

MEASUREMENT

Syllabus Area Code: M Syllabus Area Title: Measurement	
Topic	**Objectives**
Basics of Measurement	◗ Explain the various aspects of measurement in DevOps organizations, including value, goals and objectives, indicators and metrics, and compliancy.
Measuring Value	◗ Describe the key steps involved in driving adoption of DevOps within an organization, including formulating a vision statement, identifying goals and objectives, and defining measures, indicators, and metrics to measure success.
Typical DevOps Metrics	◗ Identify the leading indicators and top practices that correlate with IT performance in DevOps organizations.
Monitoring & Analytics	◗ Explain the importance of continuous monitoring in DevOps organizations to ensure transparency and enable the "Plan, Do, Check, Act" rules of continuous improvement, and to provide faster, better, and integrated feedback and alerts for identifying and eliminating potential problems and root causes.

SHARING

Syllabus Area Code: S Syllabus Area Title: Sharing	
Topic	**Objectives**
Organizational Models That Enable Sharing	◗ Describe how DevOps organizations are structured across Product teams and Platform teams
T-Shape Profiles Enable Sharing	◗ Explain the significance of having T-shaped profiles to enable sharing.
DevOps Teams	◗ Describe the behaviors expected of DevOps teams.
Team Autonomy	◗ Explain the ways of providing autonomy to DevOps teams
IT Architecture That Supports Sharing	◗ Explain the role of IT architecture in enabling information sharing.
DevOps At Scale	◗ Discuss the strategies for scaling DevOps and addressing associated challenges

DASA GUIDANCE

Syllabus Area Code: DG Syllabus Area Title: DASA Guidance	
Topic	**Objectives**
DASA Big Picture	◗ Identify the four pillars of DASA strategy
Talent Portfolio	◗ Identify the components of DASA's talent portfolio
Guidance Portfolio	◗ Identify the components of DASA guidance portfolio
Community	◗ Identify the different communities created and managed by DASA
Recognition	◗ Know the ways in which DASA offers recognition to organizations and individuals