SCALED AGILE®

SAFe® 4 Practitioner Exam Study Guide (V4.5.0)

Scaled Agile Professional Certification Program

SCALED AGILE®

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Welcome to Role-Based Learning!

Scaled Agile's role-based offerings focus on the skills, knowledge, and experience required to successfully perform the job. As part of your SAFe learning journey we encourage you to attend training, read recommended books and articles, take advantage of videos and enablement, gain some real-world experience in the role, and then take the exam.

About This Study Guide

This study guide is designed to provide relevant and content-specific exam information such as the certification role description, prerequisite skills and knowledge, exam objectives, and a comprehensive reading list. Reviewing this study guide does not guarantee success on the exam but it will provide guidance on your journey to become SAFe certified.

The sections in this study guide map to the course. There is additional information in this study guide around the certification role that has been defined by our subject matter experts (SMEs).

Preparing for the Exam

Congratulations on taking the first step towards becoming part of a growing community of SAFe certified professionals!

Preparation	Required / Recommended	Access
☐ Course Attendance	Required	Classroom Training: SAFe for Teams
☐ Exam Study Guide • Certification Role Description • Prerequisite Skills/Knowledge • Target Candidate Standard • Exam Objectives • Reading List	Recommended	Learning Plan in the SAFe Community Platform
☐ Sample Test	Recommended	On SAI website: SAFe for Teams course page
☐ Practice Test	Recommended	Learning Plan in the SAFe Community Platform
☐ Exam	Required	Learning Plan in the SAFe Community Platform

Exam Details

Information such as number of questions, time on exam, and exam format can be found under "Exam Details" at: www.scaledagile.com/safe-for-teams/.

Course Attendance

The first step towards becoming a SAFe® Certified Professional is to attend the SAFe for Teams training class. Course attendance is required (all days) and completion provides access to the exam which is part of the complete SAFe Learning Plan. A complete list of courses, including dates and locations, is on the Scaled Agile website.

Please note that attending the class does not guarantee passing the exam. Please take the time to review the materials covered in this study guide.

Certification Role – SAFe 4 Certified Practitioner

A SAFe 4 Certified Practitioner (SP) is a SAFe team member responsible for using Scrum, Kanban, and XP in a SAFe environment. Key areas of responsibility include planning Program Increments and Iterations, breaking requirements into Stories, developing incrementally with built-in quality, demoing value at a Team and Program level, and problem-solving impediments to drive relentless improvement.

Key Areas of Competency
- Explain SAFe Agile Principles
- Plan Iterations
- Plan Program Increments
- Execute Iterations and demonstrate value
- Improve Agile Release Train processes
- Integrate and work with other teams on the Agile Release Train
- Perform as member of an Agile team on an Agile Release Train

Prerequisite Skills and Knowledge
- Familiarity with Agile concepts and principles
- Familiarity with Scrum, Kanban, and XP
- Working knowledge of software or hardware development processes

Target Candidate (Qualifying Standard: 5 Levels of Competency)
This job role is defined as part of the Job Task Analysis and is based on a standardized 5 levels of competency. Candidates who pass this exam have met this qualifying standard and can demonstrate knowledge or perform skills at the designated level below:

1 - [Beginner] Minimal knowledge or experience
2 - [Novice] Some knowledge or experience with assistance
3 - [Proficient] Capable of performing tasks with some assistance **<< SAFe 4 Certified Practitioner**
4 - [Advanced] Fully competent in performing tasks with little assistance
5 - [Expert] Content developer or contributor with no assistance

Exam Objectives Overview

The first step in developing role-based curriculum is to conduct a Job Task Analysis (JTA) workshop where a group of subject matter experts (SMEs) work together to define the tasks, skills, and knowledge related to a specific job role. The JTA creates the foundation for the exam objectives and competency standard which serve as the basis for the exam. The output of the JTA includes: key areas of competency, prerequisite skills and knowledge, the candidate qualifying standard, and a comprehensive list of objectives and tasks related to the job role.

Scaled Agile SMEs use these objectives to develop exam questions. It is recommended you review these objectives and ask yourself: Do you know how to complete the tasks in the objective? Are you familiar with the terms and concepts? Do you know the outcome of NOT performing the tasks correctly (anti-patterns)? Most objectives are covered on the exam so be sure to review the materials.

Exam Objectives: Sections, Tasks, and Subtasks

Sections are the main job role topics identified during the JTA process. Tasks that are related to each section are grouped under each section and are made up of subtasks which are the actions or steps to complete the task. Example:

SECTION HERE	
1.1	TASK HERE
1.1.1	SUBTASK HERE

The objectives specific to this exam begin below and map to the course materials either at a high level or in some cases with more detail.

SAFe 4 Practitioner Exam Objectives

SECTION 1: Introducing the Scaled Agile Framework®	
1.1	Connect with SAFe and the SAFe® Configurations
1.1.1	Have a basic understanding of SAFe
1.1.2	Define an Agile Team
1.1.3	Define an Agile Team of Teams
1.1.4	Coordinate Large Value Streams
1.1.5	Define purpose and intent of an Agile Portfolio

1.2	Explore Lean, the Agile Manifesto, and SAFe Principles
1.2.1	Describe SAFe House of Lean
1.2.2	Describe the Agile Manifesto
1.2.3	Describe how Agile impacts development (Waterfall vs Agile)
1.2.4	Outline the SAFe Lean-Agile Principles
1.2.5	Describe the Principles as they relate to the SAFe Practitioner role (Focus on principles #1, #2, #3, #4, #7, #8, #9)
1.2.6	Describe the differences and impacts of small batch pull versus large batch pull
1.3	Identify Scrum, Kanban and Extreme Programming (XP) Practices
1.3.1	Compare traditional development to Agile regarding teams, requirements, and value delivery
1.3.2	Identify the three roles on Agile Teams (Development Team, Scrum Master, Product Owner)
1.3.3	Define Kanban and describe the benefits of a Kanban board
1.3.4	Define Kanban and describe the benefits of an XP environment
1.3.5	Describe how SAFe Teams are part of an Agile Release Train

SECTION 2: Building an Agile Team	
2.1	Build Your Team
2.1.1	Describe aspects of an Agile Team
2.1.2	Describe the flow of value in Agile
2.1.3	Define the benefits of cross-functional Agile Teams
2.1.4	Define the benefits of collocated teams
2.1.5	Describe each Agile Team role: Development Team, Product Owner, Scrum Master

2.1.6	Define the purpose and role of the System Team
2.1.7	Describe the benefits of organizing teams around value
2.1.8	Compare Feature Teams and Component Teams
2.2	Explore the Scrum Master and Product Owner roles
2.2.1	Describe the role of the Scrum Master within the Enterprise
2.2.2	Describe the role of the Product Owner within the Enterprise
2.3	Meet the Teams and People on the Agile Release Train
2.3.1	Describe an Agile Release Train and its purpose
2.3.2	Describe the Agile Release Train roles: Release Train Engineer, Product Management, and System Architect/Engineer

SECTION 3: Planning the Iteration	
3.1	Prepare the Backlog
3.1.1	Define Solution Features for the Program Backlog
3.1.2	Identify Features benefits and acceptance criteria
3.1.3	Describe the Team Backlog
3.1.4	Define User Stories and the 3 Cs
3.1.5	Describe the purpose of "INVEST" in User Stories
3.1.6	Define the three types of Enabler Stories
3.1.7	Describe how to split Features and Stories
3.1.8	Describe purpose and benefits of Acceptance criteria
3.1.9	Estimate Stores with relative Story points

3.1.10	Describe how Estimating Poker can be effective in estimations
3.1.11	Explain the benefits of "whole team" estimation
3.1.12	Describe how to sequence Stories
3.1.13	Describe the purpose and benefits of capacity allocation
3.2	**Plan the Iteration: Purpose, Process, Result, Commitment**
3.2.1	Explain the four steps of Plan and Commit: Purpose, Process, Result, Reciprocal Commitment
3.2.2	Describe how Iteration Planning should flow
3.2.3	Explain how size can be used to estimate duration
3.2.4	Describe ways to establish velocity when historical data does not exist
3.2.5	Describe the purpose of Iteration Goals
3.2.6	Perform story analysis and estimation
3.2.7	Describe ways a team can commit to Iteration Goals
3.2.8	Describe how iteration Planning works for Kanban teams

SECTION 4: Executing the Iteration	
4.1	**Visualize the Flow of Work**
4.1.1	Identify the steps to complete a Story
4.1.2	Set Work-In-Process (WIP) Limits
4.2	**Measure the Flow of Value**
4.2.1	Track status with charts (e.g. Burn-up charts, Cumulative Flow Diagrams)
4.3	**Build In Quality**

4.3.1	Describe the benefits of building quality into work
4.3.2	Define emergent design and intentional architecture
4.3.3	Describe Architectural Runway
4.3.4	Describe ways to perform continuous system integration
4.3.5	Describe benefits of test automation
4.3.6	Explain the benefits of and reasons for refactoring
4.3.7	Explain the benefits of pair work
4.3.8	Explain the benefits of collective ownership
4.3.9	Describe Model-Based Systems Engineering (MBSE) and the benefits of use
4.3.10	Define Set-based design
4.4	**Continuously Integrate, Deploy, and Release**
4.4.1	Describe continuous Story integration
4.4.2	Describe continuous system integration
4.4.3	Identify the six recommended Practices for Continuous Deployment (CD)
4.4.4	Develop on Cadence - Release on Demand Time
4.4.5	Decouple the release from the solution
4.4.6	Describe DevOps
4.4.7	Define a CALMR approach to DevOps
4.5	**Control Flow with Meetings**
4.5.1	Describe the purpose and benefits of the Daily Stand-up (DSU) meeting

4.5.2	Describe the purpose and benefits of the backlog refinement session
4.6	Demo Value
4.6.1	Describe the purpose and benefits of the Team Iteration Demo
4.6.2	Describe the SAFe Definition of Done
4.7	Retrospect and Improve
4.7.1	Define the Iteration Retrospective and benefits for the team
4.7.1	Discuss Iteration metrics

SECTION 5: Executing the Program Increment (PI)	
5.1	Plan Together
5.1.1	Describe the benefits of Cadence-based PI Planning Meetings within an Agile Enterprise
5.1.2	Explain the main goal of PI Planning
5.1.3	Identify and execute PI Planning Day 1 Agenda activities
5.1.4	Describe the benefits of presenting new PI content up front
5.1.5	Describe activities during Team Breakout #1
5.1.6	Create list of PI Objectives
5.1.7	Describe Stretch objectives and identify them within each team
5.1.8	Explain what SMART Team PI Objectives are
5.1.9	Explain team deliverable details for iterations, IP, Objectives, and Risks
5.1.10	Describe the purpose and benefits of a Program Board
5.1.11	Identify dependencies with other teams
5.1.12	Describe the purpose and activities of the Management Review meeting at the end of Day 1

5.1.13	Identify and execute PI Planning Day 2 Agenda activities
5.1.14	Describe activities during Team Breakout #2
5.1.15	ROAM the Risks
5.1.16	Describe the purpose of the confidence vote at the Team and Program levels
5.1.17	Participate in the confidence vote at the Team and Program levels
5.2	**Integrate and Demonstrate Together**
5.2.1	Define Program execution
5.2.2	Describe the Agile Release Train Sync and how it relates to the Scrum of Scrums and PO Sync
5.2.3	Perform new system increment every two weeks
5.2.4	Perform/participate in System Demo every two weeks
5.2.5	Identify roadblocks or challenges to system increments or System Demos
5.3	**Learn Together**
5.3.1	Describe and participate in the Innovation and Planning Iteration (IP)
5.3.2	Describe and participate in Inspect and Adapt
5.3.3	Describe and participate in PI System Demos
5.3.4	Describe and participate in the problem-solving workshop

Reading and Reference List for Exam

As part of the exam development process, each exam question is assigned a reference where the answer can be found. The references are converted into a comprehensive reading list included below. Be sure to read the links and resources contained in the reading list because there is at least one exam question written to each resource.

Please remember that the goal of this reading list is not only to be able to answer the exam questions but also to provide a broader context for learning.

Scaled Agile Website Resources
At least one exam question is written from these resources (in alphabetical order).
- www.scaledagileframework.com/
- www.scaledagileframework.com/agile-release-train/
- www.scaledagileframework.com/agile-teams/
- www.scaledagileframework.com/base-milestones-on-objective-evaluation-of-working-systems/
- www.scaledagileframework.com/Built-In-Quality/
- www.scaledagileframework.com/continuous-deployment/
- www.scaledagileframework.com/continuous-exploration/
- www.scaledagileframework.com/continuous-integration/
- www.scaledagileframework.com/devops/
- www.scaledagileframework.com/features-and-capabilities/
- www.scaledagileframework.com/implementation-roadmap/
- www.scaledagileframework.com/Inspect-and-Adapt/
- www.scaledagileframework.com/iteration-execution/
- www.scaledagileframework.com/Iteration-Planning/
- www.scaledagileframework.com/Iteration-Retrospective/
- www.scaledagileframework.com/Iterations/
- www.scaledagileframework.com/lean-agile-leaders/
- www.scaledagileframework.com/lean-agile-mindset/
- www.scaledagileframework.com/pi-planning/
- www.scaledagileframework.com/portfolio-level/
- www.scaledagileframework.com/product-owner/
- www.scaledagileframework.com/program-increment/
- www.scaledagileframework.com/program-level/
- www.scaledagileframework.com/release-on-demand/
- www.scaledagileframework.com/safe-core-values/
- www.scaledagileframework.com/safe-lean-agile-principles/
- www.scaledagileframework.com/scrum-master/
- www.scaledagileframework.com/scrumxp/
- www.scaledagileframework.com/story/
- www.scaledagileframework.com/system-demo/
- www.scaledagileframework.com/team-demo/
- www.scaledagileframework.com/unlock-the-intrinsic-motivation-of-knowledge-workers/
- www.scaledagileframework.com/visualize-and-limit-wip-reduce-batch-sizes-and-manage-queue-lengths/

Scaled Agile Download Resources

The exam covers main ideas and concepts found in these resources on the www.scaledagileframework.com website:

- SAFe Big Picture
- SAFe 4 Glossary
- SAFe Implementation Roadmap
- Case Studies

Required Books

- SAFe 4 Practitioner Student Workbook (only available from taking the course)

Know the Way: Lean-Agile Leader's Reading List

A recommended reading list is included as part of the course. This content is not necessarily covered on the exam and for your reference only.

- *SAFe® 4.0 Distilled* by Richard Knaster and Dean Leffingwell
- *Principles of Product Development Flow* by Don Reinertsen
- *The Lean Machine* by Dantar Oosterwald
- *Lean Product and Process Development* by Allen Ward and Durward Sobeck II
- *Agile Software Requirements* by Dean Leffingwell
- *The Goal* by Eliyahu Goldratt
- *Switch* by Chip Heath and Dan Heath
- *The Five Dysfunctions of a Team* by Patrick Lencioni
- *Managing for Excellence* by David Bradford and Allan Cohen
- *Out of the* Crisis by W. Edwards Deming

Search the Scaled Agile Framework Site

Need help finding a SAFe article? Looking for more details about the SAFe Big Picture or one of the SAFe roles? Use the web search option on www.scaledagileframework.com to search the entire site based on your key search terms.
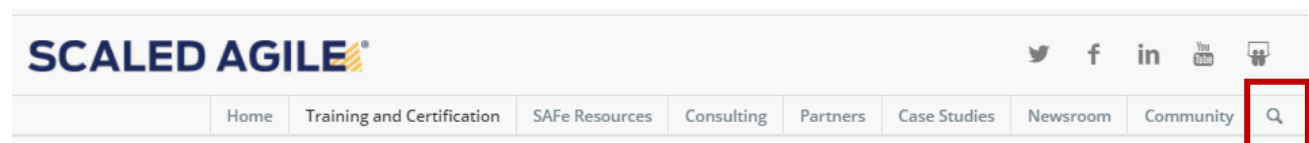
Sample Test

The sample test provides sample (not actual) content and format of the questions that are on the exam. Performance on the sample test is NOT an indicator of performance on the exam and this should not be considered an assessment tool. The sample test (.pdf) is available on the Scaled Agile external website at: www.scaledagile.com/safe-for-teams/.

Practice Test

The practice test is designed to be predictive of success on the actual exam. It contains the same number of questions as the exam, same level of difficulty, covers the same content areas (using different questions), and has the same timebox for completion. It is available on the Scaled Agile Community Platform as part of your Learning Plan.

The practice test is free and you can take it as many times as you like; however it is the same bank of questions randomized in a different order. Use the practice test score report to focus on areas where you may need improvement.

Note that the practice test falls under the same candidate agreement policy and is not authorized to be copied, shared, or reproduced in any way.

Learning Journey: Check List

- ☐ Attend the course
- ☐ Study based on the course and exam study materials provided
- ☐ Incorporate your learnings into your real-world experiences
- ☐ Take the practice test on the SAFe Community Platform

    If you passed the practice test, then you are ready to take the exam.

    If you did NOT pass the practice test, review how you did by section on the score report. Focus on the areas where you need improvement. You can take the practice test as many times as you like; however, it is the same bank of questions randomized in a different order.
- ☐ Take the actual exam through the SAFe Community Platform
- ☐ Pass the exam and become a member of the SAFe Certified global community
- ☐ Share your SAFe Certified Digital Badge and have your skills recognized worldwide
- ☐ Continue your learning journey through active participation in your Community of Practice on the SAFe Community Platform

Thank You - Subject Matter Experts

This exam and related study materials are made possible by a very dedicated group of global SAFe subject matter experts. Scaled Agile thanks these individuals for their hard work, focus, and willingness to dedicate many hours to the success of this project.

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