



Platinum
Solution Partner

**Sparking
your Agility
and
Technical Excellence!**

Course Catalog



WHO ARE WE?

Becoming Agile is a journey. *AgileSparks is the spark to light your way.*

We believe that achieving true agility and technical excellence comes from adopting an Agile mindset and culture throughout the organization. We also believe every business is unique.

Choosing the approach to agility that is right for the context and culture of your organization, is the foundation for success. Our team's expertise spans industries and contexts. Companies we've worked with include those delivering Web/SaaS products, embedded software, cyber-physical systems, Tier 1 networks, medical device products and military systems. That kind of deep and varied experience allows us to guide organizations towards agility in a way that is tailored specifically to them, thus increasing chances for a successful and sustainable implementation.

MISSION

We help (since 2008) organizations become more efficient and effective, while creating a healthier workplace.

Several of the world's leading tech firms such as Intel, HP, Philips, Siemens, Motorola, CA, AT&T, Akamai, GE, Dell and Cisco turn to us to help figure out how to achieve real agility at scale. We nurture stable, long-term relationships with our customers and partners, based on trust and respect.

WHY CHOOSE US?

Experience. Experience. Experience. The AgileSparks Way is our proven approach for implementing wide spread organizational change that is focused, managed and incremental—achieving the results organizations need to see on key performance indicators.

OUR APPROACH TOWARDS SAFe

We don't treat the Scaled Agile Framework (SAFe) like an off-the-shelf closed methodology. We treat it as a starting point that our clients can use as a template. Once they understand the basics, we assist them to pragmatically inspect and adapt it to their needs. Our clients and class participants routinely tell us that this tailored approach is a key reason for choosing us.

OUR TRAINING LEADERSHIP



Erez Tatcher
CEO, Co-Founder, SPC



Ofer Cohen
SPCT, Lead Coach, Partner



Sagi Smolarski
SPC, Lead Coach, Partner



Yael Rabinovich
SPC, Lead Coach, Partner



Oded Tamir
SPC, PST, Lead Coach



Roni Tamari
SPC, Lead Coach



Sigal Pasternak
SPC, Lead Coach



Yaki Koren
SPC, PST, Head of
Engineering Practices,
Lead Coach



Gili Aharoni
SPC, Lead Coach



Moti Sofer
Head of AgileSparks
CODE

MAJOR HUBS

Public enrollment classes available on a quarterly basis in these areas.
Talk to us about private classes in your organization – provided globally.



North America - Miami, Atlanta, Boston, New York City, Chicago, Detroit, Seattle, Toronto.

Europe - London, Stockholm, Berlin, Brussels, Bucharest, Sofia.

Israel - Tel-Aviv/Hertzelia.

India - Bangalore, Pune, Delhi, Chennai.



WHAT OUR CLIENTS HAVE TO SAY?



■ **The AgileSparks team was great! Take this course.**
Yuval and Ofer did a fantastic job tag teaming the instruction for this Scaled Agile Program Consultant (SAFe-SPC) course! both with Ruslan did a great job facilitating and overcoming the hurdles of teaching this class online during the pandemic and were great at making sure each of my classmates had an opportunity to participate in discussions and were heard. After some studying, I am confident I will pass the ScaledAgile certification exam!

■ **Thank you again, Yuval, Ofer, and Ruslan for preparing me for the world of Scaled Agile:-)**
Very good training with many principles that I can take and use to help me on a daily basis Scrum Master work. It covered new topics that I was not familiar with that can enhance my influence as a SCRUM master in the organization.

■ **Great class!**
Instructors Ofer Cohen Sigal Pasternak delivered this virtual class in a very professional way, with clear explanations and meaningful examples based on their experience. I could not imagine a remote training could be so 'real', this is additional learning I am taking from that class.

■ **Yaki Koren was a great instructor** and he explained the material thoroughly. I would have liked some kind of summary on the 'how to's with a systematic overview because doing it while the practical lesson is taking place is challenging.

■ **Good and comprehensive course.**
Moti was professional, knows perfectly the material. He was attentive to the needs of the people. All main subjects and knowledge were transferred and people gave good feedback and felt they gained knowledge. A lot of added value from Moti himself beside the material of the course.

AgileSparks

Excellent



■ **An interesting course** which not only includes regular Scrum topics but the little extra needed to make everything work and fit together. Oded is great.

■ **Excellent class and instructor.**
The online training class was a wonderful opportunity to learn about SAFe SPC and Yuval was excellent. He knew his material and the pace was reasonable. I learned very much from the class and I would recommend the course as well as Yuval to others who want to learn SAFe.

■ **Best. Class. Ever.**
Excellent instructors, excellent conversations, excellent learning!

■ **Agile Project Management with Oded**
I found this course very useful to gain an overall understanding of Agile important concepts, ideas, and frameworks. The course is obviously is for an agile approach in project management but it also compares the agile with the traditional and lean approaches at a high level. I liked very much the references which helped me to deepen my understanding.

■ **Excellent Scaled Agile Framework RTE class from AgileSparks instructor Ofer Cohen.**
The practical application knowledge and experience Ofer was able to share made the class that much better. I appreciated his willingness to engage the students, spend extra time before/after class, and just share insights overall. Very good class and I would recommend any SAFe Ofer was teaching.

■ **Great Agile Product Management workshop Professionally**
The workshop included tons of knowledge, tools, and models right from the books and from the actual industry standard. Roni, our coach is extremely experienced and has great presentation skills, creating discussion, and connecting the dots to the participating professionals. The administration and organization of the workshop were easy, marvelous, and welcoming.

OUR COURSES

(Click to get to the syllabus)

SCALED AGILE

Implementing SAFe	07
Leading SAFe	08
SAFe for Teams	09
SAFe Scrum Master	10
SAFe Release Train Engineer	11
SAFe Product Owner / Product Manager	12
SAFe DevOps	13
SAFe Agile Product Management	14
SAFe Lean Portfolio Management	15

SCRUM

Professional Scrum Master	16
Advanced Professional Scrum Master	17
Professional Scrum Product Owner	18
Advanced Professional Scrum Product Owner	19
Professional Scrum Developer	20
Professional Scrum with Kanban	21
Professional Scrum with User Experience	22

ORGANIZATIONAL AGILITY

Agile Management Workshop	23
Agile Up! With Atlassian Jira	24
Agile Project Management	25
Agile Product Management	26
Agile for Hardware and Multidisciplinary Eng Solution	27
Agile Testing- Building Quality In Agile Teams And Organizations ...	28
Agile / Lean Marketing	29
Introduction to Agile for HR Professionals	30

ENGINEERING PRACTICES

Emergent Design and End-to-End Test-Driven Development	31
Unit Tests and Test-Driven Development	32
Handling Legacy Code	33

OUR COURSES

(Click to get to the syllabus)

TECHNICAL EXCELLENCE

React Faster- React Webapp Performance	34
NodeJS Development	35
Frontend Development with Angular	36
Frontend development with React	37
Advanced React Development	38
Docker Deep Dive	39
Deep dive into Istio on Kubernetes.	40
Kubernetes Essentials	41
Modern Provisioning Using Ansible	42
Building CI/CD with Jenkins	43
AWS Architecting	44
Scala Programming	45
Advanced Scala	46
Python Intro	47
Advanced Python	48
Pro Python for DevOps and QA	49
Java Programming	50
Extreme Java for Experts	51
Akka Fundamentals	52
Microservices with Spring Cloud	53
Elasticsearch Course	54
Advanced GoLang	55
Intro to Data Science	56
and Machine Learning in Python	
Elasticsearch and Kibana	57
MongoDB	59



Implementing SAFe

4 Days



Overview

During this four-day course, attendees will learn how to lead a Lean-Agile transformation by using the practices and principles of the Scaled Agile Framework (SAFe) and the seven core competencies of the Lean Enterprise. This is a formal Scaled Agile certification course.



Who Should Attend

Professional services consultants, Internal change agents, LeanAgile Center for Excellence (LACE) participants, Agile Working Groups, Business and technology executives, leaders, managers, and directors, Portfolio managers and fiduciaries, Project/Program Management Office (PMO) personnel, Development, QA, and IT managers, Program and project managers, Product and product line managers, Process leads and lifecycle governance personnel, Enterprise, System, and Solution Architects.



Prerequisites

All stakeholders in a Lean-Agile transformation are welcome to attend the course, regardless of experience. However, the following prerequisites are highly recommended for those who intend to take the SAFe 5 Program Consultant certification exam and practice as a SAFe 5 Program Consultant (SPC):

- More than 5 years of experience in software development, testing, business analysis, product, or project management.
- More than 3 years of experience in Agile.
- One or more relevant Agile certifications.



Course Topics

Leading SAFe days 1 – 2

- Thriving in the digital age with business agility
- Becoming a Lean-Agile leader
- Establishing Team and Technical Agility
- Building solutions with Agile Product Delivery
- Exploring Lean Portfolio Management
- Leading the change
- Becoming a Certified SAFe Agilist

Implementing SAFe days 3 – 4

- Reaching the tipping point
- Designing the implementation
- Launching an Agile Release Train
- Coaching ART Execution
- Extending to the portfolio
- Accelerating to business agility
- Becoming an SPC



After attending the class, attendees should be able to

- Lead a Lean-Agile Enterprise transformation. Implement SAFe.
- Implement Lean Portfolio Management.
- Perform Value Stream identification.
- Launch and coach Agile Release Trains.
- Coordinate multiple Agile Release Trains with a Solution Train.
- Use the seven core competencies to achieve business agility.
- Train managers and executives in Leading SAFe.
- Continue your learning journey and become enabled to train other roles in a SAFe Enterprise.



Leading SAFe

2 Days



Overview

During this two-day course, attendees gain the knowledge necessary to lead a Lean-Agile enterprise by using the Scaled Agile Framework (SAFe) and its underlying principles derived from Lean, systems thinking, Agile development, product development flow, and DevOps. This is a formal Scaled Agile certification course.



Who Should Attend

Executives and Leaders, Managers, Directors, CIOs, and VPs, Development, QA, and Infrastructure Management, Program and Project Managers, Product and Product Line Management, Portfolio Managers, PMO, and Process Leads, Enterprise, System, and Solution Architects.



Prerequisites

All are welcome to attend the course, regardless of experience. However, the following prerequisites are highly recommended for those who intend to take the SAFe 5 Agilist (SA) certification exam:

- More than 5 years' experience in software development, testing, business analysis, product, or project management.
- Experience in Scrum.



Course Topics

Leading SAFe days 1 – 2

- Thrive in the digital age with business agility.
- Become a Lean-Agile leader.
- Establish Team and Technical Agility.
- Build solutions with Agile Product Delivery.
- Explore Lean Portfolio Management.
- Lead the change.
- Become a Certified SAFe Agilist.



After attending the class, attendees should be able to

- Lead the transformation to business agility with SAFe.
- Become a Lean-Agile leader.
- Understand customer needs with Design Thinking.
- Enable Agile Product delivery.
- Implement Lean Portfolio Management.



SAFe for Teams

2 Days



Overview

Build the skills needed to become a high-performing team member of an Agile Release Train (ART) and learn how to collaborate effectively with other teams by becoming a SAFe 5 Practitioner (SP). During this two-day course, you will gain an in-depth understanding of the ART, how it delivers value, and what you can do to effectively perform the role using Scrum, Kanban, and Extreme Programming (XP). This is a formal Scaled Agile certification course.



Who Should Attend

Team members who apply Lean and Agile at scale, All members of an Agile Release Train preparing for launch.



Prerequisites

All are welcome to attend the course, regardless of experience. However, the following prerequisites are highly recommended for those who intend to take the SAFe Practitioner (SP) certification exam:

- Familiarity with Agile concepts and principles.
- Awareness of Scrum, Kanban, and XP.
- Working knowledge of software and hardware development processes.



Course Topics

- Introducing the Scaled Agile Framework (SAFe).
- Building an Agile Team.
- Planning the Iteration.
- Executing the Iteration.
- Executing the Program Increment.



After attending the class, attendees should be able to

- Apply SAFe to scale Lean and Agile development in their enterprise.
- Know their team and its role on the Agile Release Train.
- Know all other teams on the train, their roles, and the dependencies between the teams.
- Plan Iterations.
- Execute Iterations and demonstrate value.
- Plan Program Increments.
- Integrate and work with other teams on the train.



SAFe Scrum Master

2 Days



Overview

Build your skills as a high-performing team member of an Agile Release Train (ART) and prepare to support the facilitation of team and program events when you become a SAFe 5 Scrum Master (SSM). This is a formal Scaled Agile certification course.



Who Should Attend

Intended for people new to the role of Scrum Master, or people wanting to better understand the role and how it fits in a SAFe enterprise, attendees typically include: New or existing Scrum Masters, Team Leads, Release Train Engineers.



Prerequisites

All are welcome to attend the course, regardless of experience. However, the following prerequisites are highly recommended for those who intend to take the SAFe Scrum Master (SSM) certification exam:

- Familiarity with Agile concepts and principles.
- Awareness of Scrum, Kanban, and Extreme Programming (XP).
- Working knowledge of software and hardware development processes.



Course Topics

- Introducing Scrum in SAFe.
- Characterizing the role of the Scrum Master.
- Experiencing Program Increment planning.
- Facilitating Iteration execution.
- Finishing the Program Increment.
- Coaching the Agile team.



After attending the class, attendees should be able to

- Describe Scrum in a SAFe enterprise.
- Facilitate Scrum events.
- Facilitate effective Iteration execution.
- Support effective Program Increment execution.
- Support relentless improvement.
- Coach Agile teams for maximum business results.
- Support DevOps implementation.



SAFe Release Train Engineer

3 Days



Overview

Facilitate and enable end-to-end value delivery through Agile Release Trains (ARTs) and learn how to build a high-performing ART by becoming a servant leader and coach when you become a SAFe 5 Release Train Engineer (RTE). During this three-day course, gain an in-depth understanding of the role and responsibilities of an RTE in the SAFe enterprise. Through experiential learning, examine the RTE role in a Lean- Agile transformation. This is a formal Scaled Agile certification course.



Who Should Attend

RTEs and Solution Train Engineers (STEs), Program and project managers, Scrum Masters, Leaders and managers, Agile coaches, SAFe Program Consultants (SPCs).



Prerequisites

The following prerequisites are highly recommended:

- Hold at least one current SAFe certification.
- Have launched or participated in at least one ART and one PI.



Course Topics

- Exploring the RTE Role and Responsibilities.
- Applying SAFe Principles.
- Organizing the ART.
- Planning a Program Increment.
- Executing a Program Increment.
- Fostering relentless improvement.
- Serving the ART.
- Continuing your learning journey.



After attending the class, attendees should be able to

- Apply Lean-Agile knowledge and tools to execute and release value.
- Assist with program and large solution execution.
- Foster relentless improvement.
- Build a high-performing ART by becoming a servant leader and coach.
- Develop an action plan to continue your learning journey.



SAFe Product Owner / Product Manager

2 Days



Overview

Develop the skill sets needed to guide the delivery of value in a Lean Enterprise by becoming a SAFe 5.0 Product Owner/Product Manager (POPM). During this two-day course, attendees gain an in-depth understanding of how to effectively perform their role in the Agile Release Train (ART) as it delivers value through Program Increments. This is a formal Scaled Agile certification course.



Who Should Attend

Product Owners, Product Managers, Product Line Managers, Business Owners, and Business Analysts, Solution Managers, Portfolio Managers, Program Managers, and members of the LACE, Enterprise, Solution, and System Architects.



Prerequisites

All are welcome to attend the course, regardless of experience. However, the following prerequisites are highly recommended for those who intend to take the SAFe 5 Product Owner/Product Manager (POPM) certification exam:

- Attend a Leading SAFe course.
- Experience working in a SAFe environment.
- Experience with Lean, Agile, or other relevant certifications.



Course Topics

- Becoming a Product Owner/Product Manager in the SAFe enterprise.
- Preparing for PI Planning.
- Leading PI Planning.
- Executing Iterations.
- Executing the Program Increment.
- Becoming a Certified SAFe Product Owner/Product Manager.



After attending the class, attendees should be able to

- Articulate the Product Owner and Product Manager roles.
- Connect SAFe Lean-Agile principles and values to the PO/PM roles.
- Decompose Epics into Features and decompose Features into Stories.
- Manage Program and Team backlogs.
- Collaborate with Agile teams in estimating and forecasting work.
- Represent Customer needs in Program Increment Planning. Execute the Program Increment and deliver continuous value.



SAFe DevOps

2 Days



Overview

To compete in a disruptive global market, every organization needs to deliver valuable technology solutions at the speed of business. This requires a shared DevOps mindset among all the people needed to define, build, test, deploy, and release software-driven systems not just the engineers operating a CI/CD pipeline. This is a formal Scaled Agile certification course.



Who Should Attend

All members of an Agile Release Train, Development Managers, Engineering Managers, Configuration Managers, Release Managers, Development Leads, Developers, UI/UX Developers, Infrastructure Architects, System Architects, Product Managers, Product Owners, System Administrators, DBAs, InfoSec, QA Managers, Testers, Release Train Engineers, Scrum Masters.



Prerequisites

All are welcome to attend the course without prior knowledge.



Course Topics

- Introducing DevOps.
- Mapping your Continuous Delivery Pipeline.
- Gaining alignment with Continuous Exploration.
- Building quality with Continuous Integration.
- Reducing time-to-market with Continuous Deployment.
- Delivering Business Value with Release on Demand.
- Taking action.



After attending the class, attendees should be able to

- Explain how DevOps enables strategic business objectives.
Apply a CALMR approach to DevOps to avoid automating broken processes.
- Understand how successful DevOps requires continuous exploration, continuous integration, continuous deployment, and the ability to release to end-users on demand.
- Incorporate continuous testing and continuous security into the delivery pipeline.
- Use value-stream mapping to measure flow and identify bottlenecks in the end-to-end delivery process.
- Select DevOps skills and tools strategically for the fastest, most compelling results.
- Prioritize DevOps solutions and investments for the greatest economic benefit.
- Design and implement a multi-phased DevOps transformation plan tailored to their organization.
- Work with all roles and levels in the organization to continually optimize the value stream.



SAFe Agile Product Management

2 Days



Overview

Discover and apply the mindset, skills, and tools you need to create successful products and solutions that are desirable, viable, feasible, and sustainable. The Agile Product Management course harnesses the power of Design Thinking to develop innovative solutions with proven SAFe capabilities to execute on those visions. Learn the right mindset, skills, and tools to create successful products from inception to retirement using Agile techniques. Recognize how Continuous Exploration fuels innovation and helps you define a vision, strategy, and roadmap to tap into new markets. Find out how to accelerate the product life cycle to get fast feedback and quickly deliver exceptional products and solutions that delight customers all while aligning with your organization's strategy, portfolio, evolving architecture, and solution intent. This is a formal Scaled Agile certification course.



Who Should Attend

Product Management teams, Product marketing managers, project managers, Product Owners, VP of Product Management, Business Owners, Business Analysts, User experience and customer experience professionals, Product leaders collaborating with Product Management, architects, subject matter experts, and business line managers.



Prerequisites

You should be familiar with Agile principles and practices and have attended at least one SAFe course prior to attending. A background in product or solution management is highly recommended.



Course Topics

- Analyzing your Role as a Product Manager in the Lean Enterprise.
- Continuously Exploring Markets and Users.
- Driving Strategy with Market Segmentation.
- Using Empathy to Drive Design.
- Defining Product Strategy and Vision.
- Creating Roadmaps to Build Solutions.
- Delivering Value.
- Managing Value Stream Economics.
- Creating Innovation in the Value Stream.



After attending the class, attendees should be able to

- Use Design Thinking to achieve desirable, feasible, and sustainable outcomes.
- Explore market needs, segmentation, sizing, and competitive landscape.
- Manage value stream economics, including pricing and licensing.
- Use empathy to drive design.
- Apply product strategy and vision.
- Develop and evolve roadmaps.
- Execute and deliver value using SAFe.
- Explore innovation in the value stream.



SAFe Lean Portfolio Management

2 Days



Overview

Create a culture of innovation, flexibility, and speed where all people in the portfolio can effectively execute as one, unified team. In this course, you will gain the practical tools and techniques necessary to implement the Lean Portfolio Management functions of Strategy and Investment Funding, Agile Portfolio Operations, and Lean Governance. You will have the opportunity to capture the current and future state of the portfolio with the Portfolio Canvas tool and identify important business initiatives for achieving the future state. You'll be able to establish portfolio flow with the Portfolio Kanban and prioritize initiatives for maximum economic benefit. The course also provides insights on how to establish Value Stream Budgets and Lean Budget Guardrails and measure the Lean portfolio performance. This is a formal Scaled Agile certification course.



Who Should Attend

This course is designed for leaders and influencers who are responsible for the Lean Portfolio Management function. Examples include: Executives and leaders (CIOs, CEOs, CFOs, CTOs, and VPs), Enterprise architects, Product managers and solution managers, Business unit managers, Program office personnel, SPCs and enterprise Agile coaches, Human resources, RTEs, Epic Owners.



Prerequisites

All are welcome to attend the course, regardless of experience. However, the following recommendations will make the training more productive:

- Familiarity with Agile concepts and principles.
- Attended a Leading SAFe or SAFe PO/PM course.
- Experience working in a SAFe environment.



Course Topics

- Introducing Lean Portfolio Management (LPM).
- Establishing Strategy and Investment Funding.
- Applying Agile Portfolio Operations.
- Applying Lean Governance.
- Implementing the LPM function.



After attending the class, attendees should be able to

- Describe the importance of LPM.
- Connect the portfolio to enterprise strategy.
- Implement Lean budgeting and guardrails.
- Establish portfolio flow with the Portfolio Kanban.
- Support operational excellence with APMO and CoPs.
- Coordinate Value Streams.
- Measure the LPM performance.
- Build a plan for LPM implementation.



Professional Scrum Master

2 Days



Overview

The 2-day Professional Scrum Master course covers the principles and (empirical) process theory underpinning the Scrum framework, and the role of the Scrum Master in it. This course is a combination of instruction and team based exercises, and teaches what is at the heart of the Scrum and Agile movement. PSM is the cutting-edge course for effective Scrum Masters and for anyone coaching a software development team toward increased efficiency and effectiveness. The course includes advanced thinking for servant-leadership and behavioral shifts. Throughout the course, students are challenged to think in terms of the Scrum principles to better understand what to do when returning to the workplace. This is a formal Scrum.org certification course.



Who Should Attend

The Professional Scrum Master course is for anyone involved in software development using the Scrum framework. It is particularly beneficial for those people within an organization accountable for getting the most out of Scrum, including Scrum Masters, managers, and Scrum Team members.



Prerequisites

- Basic Knowledge of Scrum.
- Familiarity with the “Scrum Guide”.



Course Topics

- Scrum theory and principles.
- The Scrum Framework.
- The Definition of Done.
- Running a Scrum project.
- Working with people and teams.
- Scrum in your organization.
- The role of the Scrum Master.



Advanced Professional Scrum Master

2 Days



Overview

The 2-day Professional Scrum Master II (PSM II) course is an advanced class designed to support Scrum Masters in their professional development. Unlike the Professional Scrum Master (PSM) course which focuses on how to use Scrum, the Scrum framework and the role of the Scrum Master, PSM II is an advanced course which helps students to understand the stances that characterize an effective Scrum Master and servant-leader. The class dives deep into how Scrum Masters serve the Scrum Team, Product Owner, and the organization. Students will learn about areas critical to growing as a successful Scrum Master such as how the principles and values of Scrum help guide Scrum Masters in the decisions they make and how the Scrum Master can help change the environment of Scrum Teams, creating the conditions for agility to thrive. Students will also explore related practices and skills which will enable them to have the right types of conversations and how to apply them to become better Scrum Masters. Throughout the class, your PST will provide stories, exercises, facilitation techniques (such as "Liberating Structures"), resources, and more. This is a formal Scrum.org certification course.



Prerequisites

At least- one year of Scrum Master Experience.



Course Topics

- What makes an effective Scrum Master.
- How to support the Scrum Team.
- How to support the organization.
- Challenges of middle management.
- Dealing with complexity and impediments.
- Measurement in Scrum.
- Successful product delivery and "Done".
- Facilitation techniques.



Who Should Attend

The Professional Scrum Master II course is an advanced course specifically designed for experienced Scrum Masters who have a thorough understanding of the Scrum framework. It is particularly beneficial for those with at least one year of Scrum Master experience.



Professional Scrum Product Owner

2 Days



Overview

Being a professional Product Owner encompasses more than writing requirements or managing a Product Backlog. Product Owners need to have a concrete understanding of all product management aspects, including but not limited to product ownership, that drives value from their products. The 2-day Professional Scrum Product Owner course focuses on all of these areas to teach students how to maximize the value of software products and systems. PSPO is the cutting-edge course for Product Owners, Agile product managers and anyone responsible for a software product's success in the market. In this course, students will develop and solidify their knowledge of being a Product Owner through instruction and team-based exercises. The breadth of the role's responsibilities in delivering a successful product will become more clear from an Agile perspective. Metrics are identified to track the creation of value and the successful delivery of the product to the marketplace. This is a formal Scrum.org certification course.



Who Should Attend

The PSPO course may be interesting to all involved in software development upon the Scrum framework, but has been specifically conceived for those responsible over products from a business and product management perspective and taking up the highly accountable role of Scrum Product Owner.



Prerequisites

- Basic Knowledge of Scrum.
- Familiarity with the "Scrum Guide".



Course Topics

- Agile Product Management.
- Value-Driven Development.
- Scrum Principles & Empiricism.
- The Scrum Framework.
- Product Backlog Management.
- Release Management.



Advanced Professional Scrum Product Owner

2 Days



Overview

This 2-day Professional Product Owner - Advanced (PSPO-A) course focuses on helping experienced practitioners expand their ability to establish a solid vision, validate their hypotheses, and ultimately deliver more value to their stakeholders. It is intended for Product Owners who are looking to grow their knowledge and abilities. This course is an interactive, experiential workshop where attendees explore topics through a series of exercises and discussions. Students should have at least one year of Product Owner experience and practical knowledge of Scrum in order to participate in and benefit from these exercises. This is a formal Scrum.org certification course.



Who Should Attend

The Professional Product Owner-Advanced course is an advanced course specifically designed for Product Owners and product managers who have practical experience managing or owning a product. It is also beneficial to Scrum Masters and stakeholders who work with Product Owners. It is particularly beneficial for those with at least one year of building products with a Scrum Team.



Prerequisites

Practical experience managing or owning a product and working with a Scrum Team.



Course Topics

- Understanding your products.
- Who are your customers?
- Connecting product features to customer outcomes.
- Communicating the product vision and strategy.
- Value and pricing models.
- Innovation and experimentation.
- Stakeholders and stakeholder management.
- Agile governance, budgeting and contracting in relation to Scrum.
- Scaling the Product Owner role.



Professional Scrum Developer

3 Days



Overview

The 3-day Professional Scrum Developer course provides a real-world view of what it is like to build software with Scrum. Throughout the course, students collaborate together as a team in a series of Sprints where they apply modern engineering practices, and use the Scrum framework to cope with changes. Over the 3 days, students learn how to develop increments of potentially releasable functionality from a realistic Product Backlog. Students concurrently do requirements engineering, design, development, testing, integration, and deployment within a single iteration. The course teaches how Agile engineering practices and supportive ALM tools improve a team's capabilities even more. The course is available in .NET and Java technologies, or trainers can work with your specific technology stack to make the course meet your specific needs. The .NET version was developed in partnership with Microsoft® and is the official Scrum training solution for Microsoft Visual Studio. This is a formal Scrum.org certification course.



Prerequisites

- Basic Knowledge of Scrum.
- Familiarity with the "Scrum Guide".



Course Topics

- Using Scrum.
- Working within a Scrum Team.
- Definition of Done.
- Development Practices.
- Test Driven Development.
- Pair Programming.
- Code Review.
- Using ALM tools with Scrum.



Who Should Attend

The Professional Scrum Developer course is intended for all members of a Scrum Development Team; architects, programmers, database developers, testers, and others with some technical knowledge. The class focuses on using technology to deliver software in Increments.



Professional Scrum with Kanban

2 Days



Overview

The 2-day Professional Scrum with Kanban (PSK) course teaches Scrum practitioners how to apply Kanban practices to their work. Through theory, case studies, and hands-on exercises, participants will understand the importance of transparency and flow as it pertains to the Scrum framework. Scrum is the defacto standard for how Agile teams work. Scrum exists only in its entirety and functions well as a container for other techniques, methodologies and practices. Scrum Teams keep improving how they work, based on what they learn by inspecting and adapting on an ongoing basis. In this class, students will learn how Scrum Teams can introduce additional practices from Kanban while continuing the way they are already working today with Scrum, all without changing Scrum. This is a formal Scrum.org certification course.



Who Should Attend

The Professional Scrum with Kanban course is for anyone doing Scrum. It is particularly beneficial for those people within an organization who use Scrum to deliver products to the market including Product Owners, Development Team Members and Scrum Masters..



Prerequisites

- Basic Knowledge of Scrum.
- Familiarity with the "Scrum Guide".



Course Topics

- Dispelling Common Myths.
- Understanding Professional Scrum.
- Kanban Theory, Principles and Practices.
- Kanban in Practice.
- Scrum with Kanban.



Professional Scrum with User Experience

2 Days



Overview

In this 2-day hands-on course students with some Scrum experience will learn how to integrate modern UX practices, (UX is more than UI) into the way they are working in Scrum and how to work most effectively within Scrum Teams. Design work can sometimes feel slow, and not well suited to quick agile cadences and Scrum events, but that isn't the case. Learn UX techniques that fit beautifully into Scrum, and practice these techniques with cross-functional teams in the class. Over the 2 days, students will learn UX techniques that work most effectively with Scrum Teams. In addition, you will learn practical tools and practices to best work with customers and their feedback to deliver higher value in the customer's eyes with Scrum Teams without changing Scrum. This is an excellent training for everyone who works on a product team (engineers, product managers, etc): technology teams work better when they're collaborating across disciplines and specialties. But different priorities, types of work, and the specific working rhythms of each discipline can create silos on teams and inside organizations. Learn how to use the Scrum framework and UX techniques to align your team, focus on value, and foster collaboration. This is a formal Scrum.org certification course.



Who Should Attend

Scrum Masters, Product Owners and anyone involved in delivering the product (engineers, product managers, etc) as technology teams work better when they're collaborating across disciplines and specialties. People who know UX will learn how to work more effectively inside Scrum, managing work in Sprints and visualizing it in the Product Backlog.



Prerequisites

- Basic Knowledge of Scrum.
- Familiarity with the "Scrum Guide".



Course Topics

- Scrum with UX enhances continuous learning.
- Framing work as problems to solve.
- Outcomes over outputs.
- Managing UX work in Scrum.
- Focus on users.
- Experimentation.



Agile Management Workshop

2 Days



Overview

The purpose of this 2-day workshop is to identify the pains and growth areas in the way the organization works and chart the direction in which it should change, guided by Lean/Agile values, principles and practices. After identifying the needs, the attendees are guided through Lean/Agile thinking and practices, then identify implementation areas in the organization and lastly come up with a plan.



Who Should Attend

Executives and Leaders, Managers and Directors, comprising the managerial level of the organization, usually up to 15 people. Depending on the size of the organization, additional workshops for sub-organizations may be required.



Prerequisites

The attendees should know how their organization works (though they will discover more of that during the workshop) and be ready to share and open their minds for new paradigms of thinking.



After the workshop

That's where the tough part starts. While the workshop provides an initial direction, the implementation process requires adjustments and feedback to succeed, just like the development of a new product.



Course Topics

- Identifying the organization's pains and goals.
- Lean/Agile values and principles.
- Product management practices.
- Agile frameworks.
- Scaling methodologies.
- Identifying relevant practices for the organization.
- Analyzing trade-offs.
- Creating an implementation plan.
- Identifying KPIs.



Agile Up! With Atlassian Jira

2 Days



Overview

The Agile Manifesto focuses on “individuals and interactions over processes and tools”. However, many organizations mainly large distributed organizations, find tools the best way to reflect synchronization, status and progress between teams and different personas that work together on the same project or share organizational goals.

Jira Agile/Portfolio is one of the most popular tools that organizations of different sizes use to reflect their Agile working environment. Jira is highly configurable and can be adjusted to support a variety of different agile environments.

In this course we will learn how to use Jira wisely with minimum effort for configuration to fit your organizational Agile culture.

If you find Jira configuration painful and awkward, if teams feel that using Jira is an overhead, if managers cannot get the information they need, this course is for you!



Who Should Attend

This course is targeted for people who work with Jira Agile as their tool to support their Agile environment: Agile champions/coaches, Scrum masters, Team Leaders, Project Managers, Jira Admins, Change Leaders.



Prerequisites

- Practice Agile for at least 6 months.
- Basic Jira Agile knowledge.



Course Topics

- Understand how to use Jira Agile effectively.
- Strengthen the Agile mindset and make sure JIRA Agile/Portfolio SUPPORTs (rather than detracts) agility in your organization.
- Learn to use Jira as a means to boost your agility.
- Best practices for using JIRA at the Team/Release/Program levels.



Agile Project Management

2 Days



Overview

Project Management theory and practice have changed dramatically during the last few years. More and more companies realize they need new management methodologies since traditional project management practices don't address the challenges of an increasingly complex world.

Lean and Agile practices found a good way to manage the risks related to an ecosystem's uncertainties. They focus on maximizing customer value, managing changes in scope, create a clear workflow, reduce time to market and achieve effectiveness by reducing wastes along the process.

This workshop will focus on modern Agile methods for managing projects in a complex world.

It will provide project managers a bridge to Agile and enable them to adopt practical and useful practices to implement in existing project management methodologies. As Agile change agents, they will be able to support the organization in exploring the Agile way and even to move forward with the Agile transition.



Who Should Attend

Project managers, Mid-level managers, Release managers, PMO's.



Prerequisites

Basic Project management experience.



Course Topics

- Mapping the current project management challenge.
- Why is agile needed? Agile and agility.
- Agile main concepts.
- Agile frameworks: Scrum, Kanban.
- Agile requirements and backlog management.
- The visualization concepts.
- Working in large projects SAFe Scaled Agile framework.
- The visualization concepts.
- Agile planning.
- The new Agile manager – The manager as a servant leader.
- Product management in Agile - Value-driven development Agile estimation.
- KPI and measurements.
- AgileSparks Way – how to manage Agile transformation.

Agile Product Management

Agile Product Management

2 Days



Overview

Agile Product Managers and Product Owners play a critical role in an Agile development process. They guide the continuous delivery of value and work with Agile teams to achieve fast feedback loops that allow quick learning and adaptation, in accordance with DevOps and Lean Startup principles. Participants in this workshop will gain an understanding of the PO/PM role, learn tools and techniques for effectively managing backlogs, learn how to write Epics, break them into Features and Stories, plan roadmaps, releases and iterations and become a pivotal factor in maximizing the benefits the organization gets from being truly Agile. This course is intended for individuals in organizations that are going through an Agile transformation journey.



Who Should Attend

Product Managers, Product Line Managers, Product Owners, Business Owners, Business Analysts, R&D Managers, Team Leaders and System Architects. Agile champions/coaches, Scrum masters, Team Leaders, Project Managers, Jira Admins, Change Leaders.



Prerequisites

Having prior basic familiarity with Agile will help you gain the most out of this course.



Course Topics

- Agile & Lean Introduction.
- Lean Startup Basics - how to know that we're building the right thing and know it quickly.
- Product Backlog Management - Agile approach to requirements.
- What are Epics, Features and Stories and how to write them.
- Story mapping.
- Prioritizing.
- Scrum Basics.
- PO / PM Roles - Working efficiently with Agile teams.
- Kanban Basics.
- How the value flows with roadmaps and iterations.
- KPIs and visibility.



Agile for Hardware and Multidisciplinary Engineering Solutions

2 Days



Overview

Scrum and Agile may seem less relevant for products with long, non-homogenous development lifecycles, such as electrical circuit board development or practical research.

During this two day course, attendees will learn how they can practice Agile and Lean with multidisciplinary solutions consisting of domains that may include electrical hardware, mechanical systems, chemical engineering, practical research, systems integration, software, or any other engineering domain. Attendees will learn new Agile practices relevant to these domains, review various industry examples, and will be able to share their own use cases and discuss them. The course is interactive and includes many exercises.



Who Should Attend

Managers of multidisciplinary engineering systems, managers of non-software engineering domains (electronics, mechanics, physics, optics, research, etc.), design engineers, product owners, product managers, system engineers, architects, team members, QA, production engineers, operations engineers, project managers, Agile coaches, change leaders and change agents, scrum masters and SAgile practitioners.



Prerequisites

All engineers, managers and leaders are welcome to attend the course, regardless of Lean or Agile experience. However, recognizing the daily issues and impediments of the development processes and practices in your professional engineering domain is beneficial.



Course Topics

- Through the hardware lense – Introduction to Lean, Agile, including Industry examples.
- Lean and Agile values and principles and how they apply for Hardware.
- Agile project management for complex projects with long or non-homogenous development lifecycle, value-driven hardware development.
- Lean and Agile for a team of multidisciplinary teams – including the use of platform teams, features teams and cross-functional teams.
- How non-software disciplines can support an Agile organization.
- Introduction to Scrum, Kanban and DevOps for hardware and for non-software solutions.
- Lean, Agile and DevOps specific practices and tools for various hardware disciplines.
- Designing hardware for Agility.
- Challenges and anti-patterns in applying Lean-Agile in a multi-discipline engineering context.
- Lean, Agile and DevOps production operations to support hardware Agility.



After attending the class, attendees should be able to

- Lead multidisciplinary engineering products and solutions with a Lean and Agile mindset.
- Apply Lean and Agile values, principles and practices in multidisciplinary engineering or non-software products and solutions, even when they have a long non-homogenous development lifecycle.
- Apply value-driven incremental development, iterative product development, Kanban and Scrum (to apply successful Scrum and Kanban you may also want to consider additional dedicated training such as the Scrum.org PSM course).
- Design hardware, products and solutions for Agility.
- Support hardware products using Lean, Agile and DevOps production operations.



Agile Testing- Building Quality In Agile Teams And Organizations

2 Days



Overview

When transitioning from traditional approaches to Agile development, testers are no longer handed the code after developers have finished working on it, rather, they are a crucial part of the same cross-functional team. In this workshop the new roles and responsibilities of testers are explained, as well as the new mindset adopted by the testers and the whole team. The day to day work of an Agile team throughout the iteration is discussed as well as different testing levels and the important aspect of automation.

The workshop includes interactive exercises and real-life situations, covers the key factors for successful Agile testing implementation, and provides important insights and best practices that can be implemented in your Agile teams.



Who Should Attend

Developers, Testers, Agile team members, Release Managers.



Prerequisites

None.



Course Topics

- Why Agile / DevOps?
- Agile principles and practices.
- Agile Frameworks.
- Agile Testing approach and the Testing role in Agile: Traditional vs. Agile.
- Testing through Agile lifecycle, Whole team approach, Agile testing matrix/strategy, Definition Of Done, Shift left, Build Quality-in, Success metrics, and KPI's.
- Support Programming & Business Facing with ATDD & BDD.
- Automation.
- User stories, Documentation, and what it has to do with the tester.
- Scaling Agile Testing to real-world enterprise.



Agile / Lean Marketing

2 Days



Overview

Marketing is undergoing a major disruption via the transition to Digital Marketing, Focus on Customer experience and Success & the explosion of Marketing Technology. Agile Marketing helps marketers build a healthier funnel and contribute more revenue by improving the time to market, quality, and impact of marketing campaigns.

Our 2-day workshop is comprehensive – starting from the basics, diving deeper into the real-world struggles, the underlying principles, sharing experience from real case studies, and not shying away from tough questions.



Who Should Attend

This class is for marketers and marketing leaders interested in addressing some of the challenges in marketing via a new marketing operating system.

When a few attendees come from the same marketing organization/team they can actually work on their own context and accelerate their agile marketing liftoff during the class.



Prerequisites

Having prior basic familiarity with Agile will help you gain the most out of this course.



Course Topics

- Understand the need and key drivers for Agile Marketing.
- Understand the principles of real Agile Marketing and how it's different than Agile Development.
- Understand how agile marketing teams look like.
- Learn to organize marketing work around the customer and experience.
- Learn how to plan and execute in an Agile way using Scrum and Kanban.
- Understand the difference between incrementing and iterating and how to integrate learning/experimentation into your marketing process.
- Learn from case studies of other marketing organizations that are shifting to Agile.
- Learn how to start implementing Agile Marketing in your team/organization.



Introduction to Agile for HR Professionals

1 Day



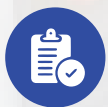
Overview

The purpose of this workshop is to understand the Agile mindset and practices, their impact on the organization, and the way in which they can be applied to HR processes. The workshop will be delivered using an Agile mindset and practices and will be tuned in real-time to the needs and interests of participants. You will get answers, hear stories from the field, discuss day-to-day scenarios, and provide practical advice and tools to help the implementation of Agility in your organization.



Who Should Attend

Everyone in the Human Resources (People) Organization.



Prerequisites

Having basic familiarity with Agile is helpful.



Course Topics

- What's Agile all about?
- The impact on HR activities in Agile transformations.
- The wide implications / mindset of Agile (not just for the Dev/R&D group).
- The organizational structure during and after the move to Agile.
- What does the change towards Agile look like and what are the main risks?
- Helping people in the organization adapt to the change.
- New roles are born- who should do them? What are the new responsibilities?
- The HR professional's pivotal role in Agile transformation.



Emergent Design and End-to-End Test-Driven Development

1 Day

Available in:

Back-end - Java, C#, Python, Node(Javascript)

Front-end - React, Angular



Overview

In this one day course, attendees will learn the concept of emergent design as a tool for Full-stack development.



Who Should Attend

Developers, beginners and experienced.



Prerequisites

Programming experience.



Course Topics

- Emergent Design vs. traditional design.
- Test types.
- Test frameworks.
- Overview of Cypress, BDD, xUnit.
- Test-Driven Development.
- Mocking.
- Bottom-up vs Top-down approaches.
- Practice practice practice.



After attending the class, attendees should be able to

Drive end to end development with emergent design concepts.



Unit Tests and Test-Driven Development

1 Day

Available in:
Java, C#, C++, Javascript, Python



Overview

In this one day course, attendees will learn how to develop software fast and with high quality, using unit tests, and how to drive design and development using TDD.



Who Should Attend

Developers at all levels, who want to add these powerful tools to their toolbox.



Prerequisites

Programming experience.



Course Topics

- Test types.
- What are unit tests, when to use.
- Unit tests frameworks.
- Arrange, Act, Assert.
- DRY vs. WET.
- Tests setup/teardown hooks.
- From writing unit tests to TDD.
- Emergent design.
- Red Green Refactor.
- To mock or not to mock.
- Practice practice practice.



After attending the class, attendees should be able to

Start using unit-tests to improve the quality and speed of their coding.



Handling Legacy Code

1 Day

Available in:
Java, C#, C++



Overview

In this one day course, attendees will stop fearing legacy code and learn how to change it so it will be more accessible and future changes will be safer and easier.



Who Should Attend

Developers at all levels, who want to add these powerful tools to their toolbox.



Prerequisites

Programming experience.



Course Topics

- What is legacy code, What is refactoring.
- Most common refactoring techniques.
- IDE refactoring.
- Adding tests to legacy code.
- Tests coverage.
- Advanced refactoring techniques.
- Refactoring to patterns.
- Harnessing legacy code – typical scenarios observed in many codebases.
- TDD on legacy code.
- Practice, practice, practice.



After attending the class, attendees should be able to

Identify patterns in legacy code and know how to exploit them to change the code in a safe manner and to make the required changes.



React Faster- React Webapp Performance

2 Days



Overview

The web has evolved. Today's web applications are more powerful than ever and do a lot more than just show some content. The users of the web have also evolved. They know there are alternatives and they expect an excellent experience from the services they are using.

A large part of the user experience comes from how fast a web app is. Research has shown that the performance of a web app has a direct effect over user engagement and thus over the business aspects. This is the reason most companies today take performance seriously and employ a range of techniques to keep it in shape.

In this course we will learn what we mean when we say performance, why it's important, and how we can keep it under control. We will learn many tools, techniques, and best practices, which are available for us as web developers to optimize performance in React apps, and in general.



Who Should Attend

Frontend developers who wish to learn how to improve the performance of their applications.



Prerequisites

- Basic familiarity with JS.
- Basic familiarity with the WEB world including HTTP, CSS, HTML.
- Some React experience is recommended.



Course Topics

- The meaning and theory of performance.
- Tools to help us do it right.
- Optimizing performance in all life stages of the application.
- Correctly utilizing the browser for performance.
- Performance in React applications.



NodeJS Development

4 Days



Overview

NodeJS is all about using JavaScript across the stack. With NodeJS you can use the same infrastructure/utilities for both client and server. NodeJS offers an impressive ecosystem of open source packages that can be combined to create a first-class server-side application.

During this course, we cover all the “must-know” details. We start with a brief introduction to NodeJS and then quickly step into core concepts like NPM, versioning, streams, testing, and more. At the end of the course, you will be able to develop server-side applications using NodeJS best practices.



Who Should Attend

Software developers.



Prerequisites

- Good familiarity with one of the OOP popular languages like Java or C#.
- Basic familiarity with Javascript.
- Basic familiarity with how the WEB works (HTTP, REST APIs).
- No NodeJS experience is required.



Course Topics

- Advanced Javascript.
- Architecture of NodeJS.
- Packages and core modules.
- Express and other frameworks.
- Communicating with the OS, databases and the network.
- Best practices for development and running in production.



Frontend Development with Angular

5 Days



Overview

Server-side developers (Java, .NET, and others) usually find the web platform as a mess. Some parts look quite interesting and advanced and some parts look like they were invented a decade ago.

Becoming a FED (Front End Developer) is a journey. First, we discover the power (and limitations) of the JavaScript programming language. Second, we explore browser APIs like DOM, AJAX, and HTML5 features. Last, we integrate them all into a modern client-side framework like Angular.

During this course, we will learn and deep-dive into every major concept that is a must for a serious FED. At the end of the course you will be able to develop rich client-side web applications using the latest web technologies.



Who Should Attend

Developers who want to get into Frontend development with Angular.



Prerequisites

- Good familiarity with one of the OOP popular languages like Java or C#.
- Basic familiarity with JS.
- Basic familiarity with WEB world including HTTP, CSS, HTML.



Course Topics

- The three pillars of web applications: Javascript, CSS, HTML.
- How the modern web works: ES, DOM, AJAX, JSON, and other acronyms.
- Developing single-page applications with Angular.
- Under the hood with Angular.



Frontend development with React

5 Days



Overview

Server-side developers (Java, .NET and others) usually find the web platform a mess. Some parts look quite interesting and advanced and some parts look like they were invented a decade ago.

Becoming a FED (Front End Developer) is a journey. First, we discover the power (and limitations) of the JavaScript programming language. Second, we explore browser APIs like DOM, AJAX and HTML5 features. Last, we integrate them all into a modern client-side framework like React.

During this course, we will learn and deep dive into every major concept that is a must for a serious FED that wants to create React applications. At the end of the course you will be able to develop rich client-side web applications using the latest web technologies.



Who Should Attend

Software developers who want to get into Frontend development with React.



Prerequisites

- Good familiarity with one of the OOP popular languages like Java or C#.
- Basic familiarity with Javascript.
- Basic familiarity with WEB world including HTTP, CSS, HTML.



Course Topics

- The three pillars of web applications: Javascript, CSS, HTML.
- How the modern web works: ES, DOM, AJAX, JSON, and other acronyms.
- Developing single-page applications with React.
- Under the hood with React: reconciliation and components.
- More advanced React topics: routing, state management, styling, and more.



Advanced React Development

3 Days



Overview

Developing a single or a number of components using React is easy. However, as the application grows, it becomes crucial to understand the mechanism beyond React and be able to profile it and hook into it. During this 3 day intensive course, we deep-dive into React implementation details and cover architecture details and alternatives. At the end of the course, you will be able to describe best practices, profile existing applications and optimize different aspects of the application.



Who Should Attend

Frontend developers.



Prerequisites

- At least ½ year experience with React.
- Good familiarity with JavaScript.
- Good familiarity with the WEB world including HTTP, CSS and HTML.



Course Topics

- React under the hood: understanding the rendering process.
- Advanced component patterns and architectures.
- Profiling and optimizing performance.
- Redux in depth.
- More advanced topics and tools: virtualization, SSR, styling and more.



Docker Deep Dive

2 Days



Overview

Docker is a very popular framework for building, shipping, and running distributed applications. It eases the deployment process.

In this course, the students understand the concepts, architecture, and use-cases of Docker and Docker Swarm.

The course involves extensive hands-on exercises which are crucial to the understanding of the Docker mechanics.



Who Should Attend

Developers, DevOps, System Administrators.



Prerequisites

- Basic Linux commands.
- Basic Programming Concepts (control flows, conditionals, scripting).



Course Topics

- Introduction to Docker- The problem domain, How Docker works (Linux namespaces, cgroups), Docker vs VM, Docker architecture, Installing Docker.
- Containers- Running containers (3rd party containers, Logging), Managing containers.
- Volumes- Mounting volumes to a container, Managing Volumes (Listing, Deleting), using data containers.
- Building images- Dockerfile syntax (FROM, ADD, RUN, CMD), Build configuration, Image caching, Managing Docker images (Tagging, Publishing to the registry, Deletion).
- Docker compose- Docker compose syntax (Services, Build definitions, Inheritance), Networking, Docker-compose cli api.



Istio

AgileSparks

Deep dive into Istio on Kubernetes

2 Days



Overview

As the complexity of microservices applications grows, it becomes extremely difficult to track and manage interactions between services. Wouldn't it be better if developers could focus on writing the code for the services business logic, instead of spending their time wiring application logic to support the service mesh?

Istio to the rescue.

The course involves extensive hands-on exercises which are crucial to the understanding of the Istio mechanics.



Who Should Attend

Developers, DevOps, System Administrators.



Prerequisites

- Basic Linux commands.
- Basic Programming Concepts (control flows, conditionals, scripting).
- Docker, Kubernetes Knowledge.



Course Topics

- Introduction- Introduction to Istio as a ServiceMesh solution, Installing and configuring Istio on Kubernetes, Istio Architecture, Installing a sample application into Istio service mesh.
- Istio Traffic Management- ingress and egress Gateway, Applying Routing rules using VirtualService, Controlling traffic policy using DestinationRule, Canary Deployment using VirtualService and DestinationRule, Blue Green Deployment Using VirtualService, Deploying new Version To Production with DarkLaunch, Making sure Our App is fault Tolerant, Fault Injections (Delays, Aborts, timeouts), Handling Failures, Recover using Retries and Circuit Breakers, Accessing external services using ServiceEntry.
- Istio Security- Service Identity, Istio Secure Naming concept, Service Authentication using Peer Authentication, User Authentication using Jwt, Authorization and Access Management, Protecting the cluster with Istio egress gateway and Kubernetes network policy.
- Monitoring and Observability: Understanding Istio extensibility model, Kiali, Grafana, Prometheus, Jaeger.

USA

Email: usa@agilesparks.com
Phone: +1-617-564-0455

Europe

Email: academy@agilesparks.com
Phone: +972-53-222-1473

India

Email: asi@agilesparks.com
Phone: +91-98237-87888



kubernetes

Kubernetes Essentials

2 Days



Overview

Kubernetes is a popular framework for managing container deployments on a cluster. In this course, the students will learn the concepts of Kubernetes (e.g., Pods, ReplicaSets, Deployments, Services) as well as deployment patterns and best practices. The course includes extensive hands-on exercises will are crucial to the understanding of the topics.



Who Should Attend

Developers, DevOps, System Administrators.



Prerequisites

Basic Linux commands, Basic Programming Concepts (control flows, conditionals, scripting).



Course Topics

- Introduction to Kubernetes: Kubernetes architecture, Masters And nodes, Kubernetes components, Interacting with Kubernetes api, Declarative and Desired State, Reconciling state.
- Kubernetes Basic Workloads - Pod: An overview of images and containers, Pods, Labels & Selectors, Namespaces.
- Kubernetes Controllers: ReplicaSet, Deployment, DaemonSet, StatefulSet, CronJob.
- Networking And Services: How services work, Load balancing, Virtual service IP, Talking to services, Exposing Services, Service Endpoints, Headless services.
- Volumes: Kubernetes volumes vs. Docker volumes, Type Of Volumes, persistentVolumeClaim, StorageClass, Dynamic vs Static Volume Provisioning.
- Secrets And ConfigMaps: Managing configuration using configmaps, Exposing configmaps to containers, Configuration using Secrets, Retrieving and Decoding a Secret, Difference between configmap and secret.
- Kubernetes Security: Authenticating with TLS certificates, Authenticating with tokens, Understanding Service Accounts, Pods And Service Accounts, Users vs Service Accounts, Authorization in kubernetes Using Role-based access control, Binding a role to the service account, Roles vs Cluster Roles.
- HealthChecks: Container Probes, Liveness and Readiness.

The course includes a virtual lab for each section.



ANSIBLE

Modern Provisioning Using Ansible

3 Days



Overview

This course is designed to provide you the tools for:

- Working with Ansible.
- Understand how Ansible can be used for Deployment use cases in Amdocs..



Who Should Attend

The course is designed for DevOps, Infrastructure, or Development teams seeking to obtain a solid foundation with Ansible.



Prerequisites

- Basic Unix commands.
- Basic Programming Concepts (control flows, conditionals, scripting).



Course Topics

- Linux Fundamentals: Users and Permissions, Sudoers, Package Managers, Yum package manager, Systemd, Hands-on session.
- Inventory and ad-hoc commands: Static inventory, Dynamic inventory, Using Ansible and Using Ad-hoc Modules, Inventory variables, Host variables, Group variables, Hands-on session.
- Playbooks: Anatomy of a Playbook, YAML Syntax, Anatomy of a Task, Module and its Arguments, Testing your playbook (dry run), Popular Modules, Amdocs yum_secure module, Hands-on session.
- Advanced Playbooks: Variables, Play variables, Variable files, Extra variables, Using variables in playbooks, Basic variables, Lists, Dictionaries, Compound variables, Registering output of tasks in variables, Facts, Conditions, Loops, Handlers, Hands-on session.
- Structuring Best Practices: Structuring playbooks, Includes, Variable includes, Play includes, Task includes, Dynamic vs Static includes, Hands-on session.
- Roles: Introduction to roles, Building Simple roles, Invoking Roles from playbooks, Ansible Galaxy, Using Ansible Galaxy Roles in Playbooks, Hands-on session.
- Intro to Python: Introduction to Python, Python Packages and resources, Hands-on session.
- Custom Modules: Custom Modules, Custom Modules Parameters, Ansible Python Support for Modules, Communicating Back to Ansible, Testing custom modules, Hands-on session.



Jenkins

Building CI/CD with Jenkins

3 Days

AgileSparks



Overview

Jenkins is an open-source and probably the most popular continuous integration tool that serves as an orchestrator for building testing and shipping a product.

On this course, we will be learning how to build test and deploy CI/CD with Jenkins 2 as an orchestration tool together with groovy as a programming language enabling us to create pipeline as a code.



Who Should Attend

Developers, System Administrators.



Prerequisites

None.



Course Topics

- Introduction to Jenkins.
- Jenkins components.
- Jenkins dashboard.
- Master and slaves.
- Job types.
- Anatomy of the Job.
- Jenkins plugins.
- Testing and Continuous Integration.
- understanding Jenkins file.
- Maven example.
- Building Jenkins pipelines using groovy.
- using Jenkins with docker.
- Archiving Artifacts.
- Email Integration.
- Slack Integration.
- Using Jenkins with Artifactory.
- Adding Sonarqube.
- Blue Ocean.
- Jenkins security.
- Troubleshooting Build Failures.
- Adding tests.



AWS Architecting

5 Days



Overview

The Cloud is probably the most important advancement in designing highly available, fault-tolerant and scalable web or data processing applications. AWS is the premiere cloud provider today. This course teaches how to utilize the services offered by AWS in order to design and implement the most efficient, cost-effective, easy to code, and easy to maintain systems that will run on AWS infrastructure.

We will cover both IASS and PASS topics teaching both how to port on-prem applications to the cloud and use AWS as an IASS provider but also how to use AWS as a PASS provider which should cut costs and investment.



Who Should Attend

Anyone with IT experience. In fact, attendees often have diverse backgrounds: Infrastructure, IT, programmers, database administrators, system administrators, DevOps people, team leaders, architects, finance administrators, managers, and more. Experience in IT is a requirement and a plus.



Prerequisites

Experience in IT in some fields is required.



Course Topics

- AWS overview.
- Types of applications: pure cloud, hybrid, on-prem.
- Principles of designing highly available, fault-tolerant, scalable systems.
- IASS services intro: regions, availability zones, best practices. Infrastructure services: VPC, subnets, security groups, nacls, IGW, Elastic IPs, ELB, Standard patterns- multiple availability zones, load balancers on entry, load balancers between, layers, separation of subnets, multiple VPCs, bastion hosts, multiple accounts.
- Identity and secure access services: IAM, users, groups, roles, best practices, interfacing other identity systems.
- EC2: machine types, AMIs, EBS, Pricing, Monitoring (Cloud-Watch), Autoscaling.
- Storage and mass data access services: S3, Glacier, Storage Gateway, Snow family, EFS, FSx, AWS Backup, Cloud Front, Security and encryption, Route53., Other offerings.
- Application services: SQS, SNS, Elastic Transcoder, Workspaces, Other offerings.
- Database services: RDS, Dynamo DB, Database Migration Service (DMS), Aurora, Elasti Cache, Redshift, Other offerings.
- High-level services: Elastic Beanstalk, OpsWorks, Cloud Formation, Other offerings, Networking services, PrivateLink, Direct Connect, Transit Gateway, Other offerings.
- Developer and DevOps services: CodeCommit, CodeBuild, CodePipeline, CodeDeploy, CodeStar, Other offerings.
- Container and Serverless services: Container Registry, EKS, ECS, Fargate, API Gateway, Lambda, How to combine with API gateway, Kinesis, S3, DynamoDb, Step Functions, Other offerings.
- Conclusions: Cloud best practices, Keeping up with AWS.



Scala Programming

3 Days



Overview

Scala is a type-safe programming language that runs on top of the JVM. Scala was tagged as the "long time replacement for Java". Scala is both object-oriented and functional, thus allowing developers to easily express themselves using powerful tools without losing performance.

By the end of the course, the students will know the Scala language, how to use it, applying correct patterns, and will also have extensive hands-on experience which is crucial when learning a new language.



Who Should Attend

Java developers, Team Leaders, Project Managers.



Prerequisites

Java Knowledge.



Course Topics

- Introduction to Scala: Why another Language?, The Features of Scala, Scala's Extensibility, Scala vs. Java.
- Basic Syntax (for Java Developers): Basic syntax compared to Java, Basic Class syntax, Visibility Rules.
- Object-Oriented Programming in Scala: Everything is an Object, Objects and Companion Objects, No Operators (just Functions), Introducing Parameterized Types, Traits & Mixins.
- Functions: High Order Functions, Lambdas and Closures.
Collections: Mutable vs. Immutable Collections, Comparing and Integrating with Java Collections, Functional API, Persisted Collections, Sequences.
- Pattern Matching: Case Classes, Pattern Matching, Exception Handling.
- For Expressions.
- Implicits: Implicit methods, Implicit classes, Implicit parameters.
- More Topics: Tail Recursion, Futures, and Promises.
- Testing Frameworks.
- Introduction to Functional Programming: What is Functional Programming, Abstractions, Overview Monoids, Functors, and Monads.



Advanced Scala

4 Days



Overview

Scala is a type-safe programming language that runs on top of the JVM. Scala is tagged as the “long time replacement for Java”. Scala is both object-oriented and functional, thus allowing developers to easily express themselves using powerful tools without losing performance.

In this course, we'll focus on the advanced syntax features that Scala offers. We'll also dive into Functional Programming idioms and how to implement them in Scala.



Who Should Attend

Scala developers, Team Leaders.



Prerequisites

Good Scala Knowledge.



Course Topics

- Recap: For Comprehensions, Implicits, Parameterized Types and Variance. Functional Abstractions: The TypeClass Pattern, Equality, Monoids, Functors + Composition, Lambda Types, Kind Projector Plugin, Monads.
- Immutability: The Benefits of Immutability, Introducing Lenses , Lenses Composition, Partial Lenses, Monocle (3rd Party), The Global Variable Problem, Introducing the State Patten, State as a Monad, State & Lenses.
- Effects: Problems with Effects and FP, Monads Composition Problems, Monad Transformers, Trampolines and Recursion, The Free Monad, Extensible Effects, Eff (3rd party).
- Generic Programming: Introducing Shapeless, Working with HList, Generic[_], CoProducts, Typeclass Derivation.
- Effects: The Problem with Multiple Effects, Overview of MonadTransformers, The Free Monad, Introducing Eff, Composing Effects.
- The Scala Ecosystem: Typelevel Projects, Cats, Testing Frameworks, Writing FP Micro-Services.



Python Intro

3 Days



Overview

Be able to create python 3 programs which

- Parse & process text
- Interact with the user and the local system

Create well-structured, reusable and easy to maintain programs by

- Being aware of python coding standards and idioms
- Including automated testing in your programs
- Adopting pythonic project structure



Who Should Attend

Developers, QA & Devops with previous programming experience



Environment

Python 3 on Windows, Linux or mac
A working python installation



Course Topics

- Hello world - the anatomy of a simple python program
- Running python scripts: Command-line, repl, jupyter
- Variables and Data types



Course Topics

- Control structures (conditions, loops)
- Functions & scopes
- Importing packages and files
- Parsing text with python
- Lists and tuples
- Dictionaries
- Exceptions - Handling
- Exceptions - Generating
- The python ecosystem
 - Editors & Development environments
 - Python style: PEP8 & linters
 - Python vs. other languages, when to use Python
 - Installing and managing packages using pip
 - Using virtual environments
 - Python versions
 - Installing packages using pip
 - Python at scale: Structuring a project
- Interacting with the user
 - Parsing command-line arguments
 - Reading input
 - Formatting output
 - Logging
- Interacting with the OS
 - Working with date and time
 - Reading and writing files. Text and CSV
- Interacting with other systems
 - Getting data from the network using the requests library
- Object Oriented python (overview)



Advanced Python

3 Days



Overview

Take your Python skills to the next level
Learn about the new and exciting features of Python 3.9



Who Should Attend

Developers, QA & Devops with previous programming experience



Environment

Python 3 on Windows, Linux or mac
A working python installation



Course Topics

This course contains a mix of advanced topics. It can be customized to include and exclude any of those

- Object Oriented Python
- TDD & BDD with python. Using pytest & pytest.BDD
- Creating web services (Flask, FastAPI, jinja2)
- Functional programming using comprehensions & lambdas, Iterators and generators, itertools
- Asynchronous python - Threads and multiprocessing, async/await
- Python and the cloud. AWS S3, firebase & google storage
- Intro to Data Science: Jupyter, numpy and pandas. Matplotlib
- Overview of Machine Learning with PyTorch. The basic ML workflow
- Working with databases (using sqlite, ORMs, mongodb)
- Embedded Python - Python on arduino & raspberry pi (ESP-32 / raspberry pi/zero/pico)
- Building extensions to python (SWIG)
- Building larger python projects (pyinstaller, packages, docker)
- Web scraping using BeautifulSoup & MechanicalSoup
- Creating desktop apps using TkInter, PyQt
- Advanced scripting (interfacing with the OS, task management, system monitoring, command-line arguments...)



Pro Python for DevOps and QA

2 Days



Overview

This course will help raise the bar from “hacking” with python, to professional-level code you and your peers can maintain.



Who Should Attend

DevOps and QA people with basic knowledge of python. Software developers who want to polish their knowledge of system-level programming, and Automated testing using Python.



Prerequisites

Working knowledge of Python (2 or 3).



Course Topics

- Setting up Python: Packaging and Isolation using pip & virtualenv, Editing python. Visual Studio Code, pylint, Debugging using VSC, Coding style and PEP-8, Documenting python code using pydoc and doctest.
- Writing Tests: Automating tests and the test pyramid, Writing our first test, The Setup / Execute / Verify / Teardown pattern, Measuring tests coverage.
- Using pytest: pytest vs unittest, Test discovery & Structuring unit tests, Selective running of test using marks, Testing exceptions, Python project structure.
- TDD -Test Driven Development: The Fail-Implement-Pass-Refactor Cycle, Writing clean tests using pytest Fixtures.
- Isolating system dependencies: Dependency injection, Mocking, Stubbing, Patching.
- ATDD/BDD: Writing acceptance criteria, Definition of Done, Code Reviews, Gherkin, Automating gherkin test specs using a BDD framework pytest.BDD, Cross- framework tests coverage.



Java Programming

5 Days



Overview

Java is one of the most popular programming languages. It is an Object-Oriented, portable, fast, and rich language. Java provides many services out of the box (e.g, memory management, security) which helps developers be more productive. The course is intended for anyone who wants to enter the 'Java World'. The course includes many examples and hands-on exercises through which the material is demonstrated and practiced. The course is based on Java 13.



Who Should Attend

Developers that want to learn the Java language.



Prerequisites

Familiarity with Object-Oriented concepts.



Course Topics

- Introduction to Java.
- Basic Syntax.
- Expressions.
- Using Arrays.
- Java Classes.
- Basic Design Patterns.
- Exceptions & Assertions.
- IDE, Classpath & JARs.
- Working with Common Classes.
- The Java Collection Framework & Generics.
- Java IO.
- Multi-Threading.
- Networking.



Extreme Java for Experts

3 Days



Overview

Although Java is considered a relatively easy to use language, it has many sophisticated mechanisms and delicate points that are in many cases not fully utilized or even known to developers. Proper use of these mechanisms and "under the hood" structures greatly enhances code optimization and fine-tuning.

This advanced course focuses on these fine points and internal mechanisms and provides the "behind the scene" understanding of core Java libraries and the JVM internals. The knowledge gained in the course will significantly improve developers' ability to write more efficient and robust code.

The course includes many examples and hands-on exercises through which the material is demonstrated and practiced.



Who Should Attend

JavaSE/EE developers, team leaders, and Architects.



Prerequisites

2 years experience in Java Programming.



Course Topics

- Multi-Threading and the JMM: Introduction, The Java Memory Model, Core Java threading, functionality, Advanced Synchronization Mechanisms (java.util.concurrent), Fork/Join, Working with CompletableFuture, Third-party Concurrency Models (Akka vs. Vertx.io).
- Memory Management & GC: Introduction, The GC Anatomy and Algorithms.
- Reference Objects, Buffers & Native Memory.
- Generics, Streams & Collections: Understanding generics in and out, Deep Dive into Lambdas, Stream API, Overview on Third-Party Collections.
- Classloading & Agents: Understanding Class Loaders in Java, Agents, and Instrumentation.
- Performance & Monitoring: The JIT compiler and the HotSpot JVM, String Handling, Exceptions, JVM Tools (VisualVM & JMC, jstat & jmap), Analyzing Heap Dumps, Profiling Java Applications.



Akka Fundamentals

2 days



Overview

Writing multi-threaded code is hard. Akka is an open-sourced framework that enables you to easily and safely develop concurrent, distributed and fault-tolerant applications in a lightweight manner. This 2-day course includes extensive hands-on for a deep understanding of the material.



Who Should Attend

Java developers, team leaders and project managers.



Prerequisites

Familiarity with the Java language.



Course Topics

- Introduction to Akka: The Java Memory Model, The Problem in Writing Concurrent Applications, Understanding the Actor Model, The ActorSystem, Creating Actors, The ActorRef, Sending Messages, Immutability.
- Flows: Waiting for Responses, Futures, Composing Futures, Actor Lifecycle, Timeouts, Forwarding, Routers, FSM.
- Supervisor Hierarchies: Creating Child Actors, Supervisor Strategies, Actor Paths, Exception Handling and Failures, DeathWatch.
- Threading Models: Mailbox Types, Dispatcher Types, Priorities.
- Advanced Concepts: Actors with Stash, 'Becoming' (State Pattern), Scheduling, Persistence.
- Events: The EventStream, Handling Logging, Creating Events, Classifiers.
- Akka Typed overview, Protocols, Supervision & Persistence revisited, Transactors and STM, Testing typed behavior.
- Clustering: Remote Actors, Serialization Protocols, Clustering, Distributed Pub-Sub.



Spring Cloud

Microservices with Spring Cloud

2 Days



Overview

Spring Framework is a popular and effective open-source framework for Enterprise Java developers. Spring provides the infrastructure for modular and maintainable application development. Spring Cloud builds on Spring and Spring Boot to provide essential infrastructure and common pattern solutions for Microservices and Cloud-based applications. This course covers Microservices and REST and provides hands-on experience with Spring Boot and Spring Cloud.



Who Should Attend

Java developers who want to use Spring Microservices application development, Java developers who want to leverage the readymade solutions of Spring Cloud.



Prerequisites

Experience with Java Development, Experience with Developing Spring Applications.



Course Topics

- Spring DI and Boot overview.
- Microservices Overview: Intro, Advantages, Challenges, and Costs.
- Spring Cloud: Centralized Configuration, Service Discovery (Eureka), Circuit-Breakers (Hystrix), Load Balancing (Ribbon), Gateway (Zuul), Declarative Clients (Feign).



elasticsearch

Elasticsearch Course

3 Days



Overview

The purpose of this course is to provide knowledge of how to work with and operate Elasticsearch. We will have an overview of Elasticsearch and the Elastic stack, learn how to index/query data, how to model data, and how modeling affects performance. We will also learn about Elasticsearch's internals and how to tailor a cluster to fit your specific requirements.



Who Should Attend

Developers / Tech Leaders / DevOps Engineers



Prerequisites

Basic understanding of HTTP, JSON, and Databases.



Course Topics

- Introduction: Elasticsearch, Elastic stack.
- First Steps:
 - Installing Elasticsearch & Kibana locally.
 - Running Elasticsearch & Kibana on Docker.
 - Architecture.
 - Sharding.
 - Replication.
 - First queries.
 - Curl.
 - Postman.

- Working with Documents.
 - Creating & deleting indices.
 - Indexing.
 - Fetching queries by ID.
 - Updating documents.
 - Deleting documents.
 - How Elasticsearch reads/writes data.
 - Document versioning.
 - Batch processing.
- Mapping
 - Inverted indices & lucene.
 - Data types.
 - Explicit mapping.
 - Updating existing mapping.
 - The reindex API.
 - Dynamic mapping.
 - Top words & stemming.
 - Analyzers.
- Searching Basics.
 - URI searching.
 - Query DSL.
 - Understanding the search mechanism.
 - Reading results.
 - Query context.
 - Full text / term-level queries.
- Searching Advanced .
 - Term level queries in depth.
 - Full text queries in depth.
 - Boolean queries.
 - Queries join.
 - Controlling results, aggregations.
- Optional - Cluster sizing, understanding the requirements, single shared testing, Node saturation, cluster sizing.



Advanced GoLang

3 Days



Overview

This advanced GoLang course is project-based: building a shared “game” server that students can use to interact with each other via defined APIs. There is also a strong “code reading” portion, whereby students can check their understanding of Go by reading and modifying Opensource Go Projects. This course will also explore concurrency (by diving into more concurrency patterns) and the standard library, as well as provide coding activities using popular Go libraries/frameworks (such as logging and microservices).



Prerequisites

Skill level:

- Familiarity with Docker.
- Basic Familiarity with Go.
- Experience with Kubernetes in a Production environment.
- Nice to have: Managed DB & servers.

The course requires minimum machine configuration and setting (will be provided separately).



Course Topics

- Why Go?
- Setting up Go environment: \$GOPATH & \$PATH.
- Go Syntax overview (Refresher). Flow control, switch statements, ranges, array, slices...
- Introduction to Goroutines: sync.waitgroup, GOMAXPROCS, Go scheduler.
- Go runtime: Garbage collector, understanding Go's Scheduler.
- Channels and select statement.
- Go build and Go run: Binaries (GOOS & GOARCH / CGO_ENABLED).
- Object oriented using Go.
- xUnit style tests using built-in testing package.
- Using testify/assert: Packaging & imports.
- Directory layout: Working with third-party packages - Go modules, higher order functions.
- Context package
- os: Awesome 3rd party packages (flag, validator, viper, etc.)
- Building web services in Golang.
- Using gorilla/mux for ReSTful APIs: Performance tuning, instrumentation & analysis.
- Profiling.
- Tracing: HTTP tracing.
- Escape analysis: go build -gcflags "-m -m", understanding stack and heap memory, interop.
- Package plugin.
- Writing your own K8s operator in Go using Operator Framework.

Intro to Data Science and Machine Learning in Python

3 Days



Overview

Data science and machine learning are becoming increasingly mainstream in software products. As a developer, if you want to get into that playing field, come and get a taste of the skills needed, and start your journey on that path. During this training you will:

- Analyze, visualize and derive insights from data using python
- Create a basic, end-to-end, machine learning model
- Understand the full workflow of Data Science and Machine Learning, from exploration to production

The course is hands-on and the participants are expected to take part in coding throughout the course



Who Should Attend

Software Developers



Prerequisites

Python programming experience

No programming experience with Python? Consider taking our Python intro course



Course Topics

- The data exploration cycle
- Jupyter notebook & Google colab
- Numpy. Working with arrays
- Pandas. Working with dataframes
- Data import & cleaning, filling the gaps
- Hands on: analyzing weather data
- Basic visualization with Matplotlib
- AI, Machine Learning and Deep Learning concepts
- The ML Workflow
- Regression systems
- Backpropagation & Gradient Descent
- Pytorch. Working with tensors
- Features engineering. Scaling and one-hot encoding
- Artificial Neural networks
- Hands on: Working through an end-to-end machine learning flow
- Overview of common architectures - ANNs, CNN, RNN, GANs
- From ML to production - Overview of the ML ecosystem



Elasticsearch and Kibana

4 Days



Overview

This Elasticsearch training intends to provide a solid foundation in search and information retrieval. It starts with fundamental concepts and follows with internals, best practices, and key features. Each topic is followed by a hands-on lab. At the end of the training, the attendee will have a deep understanding of how Elasticsearch works, will be able to reliably analyze data, and will be ready to build search applications and present visualization using Kibana



Who Should Attend

- Architects
- DBAs
- BI developers and analysts



Prerequisites

Basic knowledge of database concepts and data presentation tools



Course Objective

Upon completion of the course, participants will be able to:

- Describe and design an ELK environment
- Create Elasticsearch cluster
- Control and monitor the Elasticsearch cluster
- Use Kibana for visualizationscosystem



Course Topics

DAY 1

Module 1 - Introduction to the Elastic Stack

- Elasticsearch
- Kibana
- Logstash
- Beats
- Security
- Alerting
- Monitoring

Module 2 - Introduction to Elasticsearch

- The Story of Elasticsearch
- Documents
- Indexes
- Indexing Data
- Searching Data

Module 3 - The Search API

- Introduction to the Search API
- URI Searches
- Request Body Searches
- The match Query
- The match phrase Query
- The range Query
- The bool Query
- Source Filtering

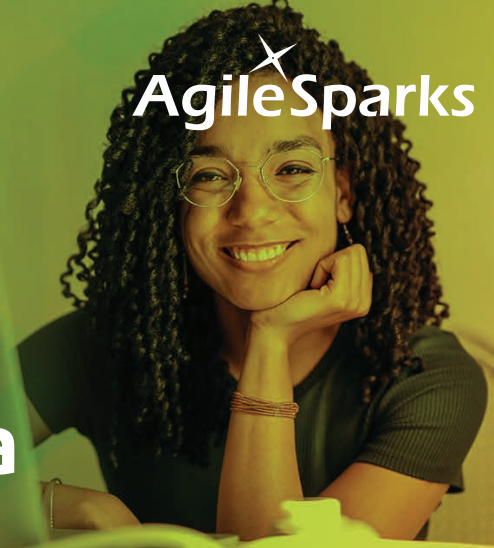
[Continue...](#)



Elasticsearch and Kibana

Continued

4 Days



Course Topics - Continued

DAY 2

Module 4 - Text Analysis

- What is Analysis?
- Building an Inverted Index
- Analyzers
- Custom Analyzers
- Character Filters
- Tokenizers
- Token Filters
- Defining Analyzers
- Synonyms
- How to Choose an Analyzer
- Segments

Module 5 - More Search Features

- Filters
- Term Filters
- The match_phrase_prefix Query
- The multi_match_Query
- Fuzziness
- Highlighting
- More Like This

DAY 3

Module 6 - Working with Search Results

- The Anatomy of a Search
- Relevance
- Boosting Relevance
- DFS Query-then-fetch
- Sorting Results
- Doc Values and Fielddata
- Pagination
- Scroll Searches
- Choosing a Search Type

DAY 4

Module 7 - Aggregations

- What are Aggregations
- Types of Aggregations
- Buckets and Metrics
- Common Metrics Aggregations
- The range Aggregation
- The date_range Aggregation
- The terms Aggregation
- Nesting Buckets

Module 8 - More Aggregations

- Global Aggregation
- The missing Aggregation
- Histograms
- Date Histograms
- Percentiles
- Top Hits
- Significant Terms
- Sorting Buckets



MongoDB

3 Days



Overview

MongoDB training introduces a NoSQL database that is cross-platform, document-oriented, that provides high performance, high availability, and easy scalability.

In the course, we will Understand MongoDB and NoSQL domain, create MongoDB clusters for different kinds of applications, understand MongoDB Architecture, design and model Applications for MongoDB, and cover basic operations, monitoring and troubleshooting.



Who Should Attend

Developers, Architects, DBAs



Prerequisites

Familiarity with Linux command line, minimal knowledge of a modern programming language, database, or data-warehouse concepts



Course Topics

NoSQL

MongoDB Concepts

- Overview
- Advantages
- Environment
- Data Modelling
- Create and drop Databases
- Create and drop Collections
- Datatypes
- Insert, query, update and delete documents
- Projections
- Limit Records
- Sort Records
- Indexing
- Aggregation
- Replication

Operation

- Sharding
- Deployments
- Backups

Advanced topic

- Relationships
- Database References
- Covered Queries
- Analyzing Queries
- Atomic Operations
- Advanced Indexing
- Indexing Limitations
- Text Search

CASE STUDY

Artlist: Achieving end-to-end Business Agility

Artlist is a leader in the field of creative technology and was created by movie creators, for movie creators. By producing quality and original music, sound effects, and footage, the company helps creators worldwide to develop quality content.

At the time of our engagement with Artlist, the company was struggling to make a transition from a startup relying heavily on the founders, to an established enterprise capable of growing fast while keeping nimble and fast.

AgileSparks solutions

- Management Workshop with the founders, to create the vision.
- Management Workshop with leaders from the entire organization, including HR, Legal, Finance, Creative, Marketing departments.
- Design and launch of an Agile Release Train (ART).
- Program Increment Planning.

Results

- 100% increase in revenue.
- 30% increased revenue per existing user.
- Significant improvements in time-to-market.
- Ability to launch a new product during the Covid-19 crisis.
- Ability to scale.



Our ability to continue moving fast during the Corona-virus crisis gave us irrefutable proof for the power of the Agile processes and mindset we adopted. The teams kept pushing forward enjoying the trust and ability to move autonomously, with clear alignment and decision-making processes."

Itzik Elbaz, CEO, Artlist

CASE STUDY

Rapid RTC: Moving Into The Fast Lane With SAFe®

RAPID RTC delivers market-leading, proprietary software solutions to several verticals including the automotive and agriculture sectors that enable comprehensive lead management and lead generation through real-time customer conversations via its Lead Manager, Chat, and Text products.

At the time of our engagement with RAPID RTC, this successful company was poised for continued expansion and growth. It had goals to enter new markets and had interest from customers in new verticals. But the company's evolution had revealed challenges that were impeding its ability to capitalize fully on the opportunities. These challenges included:

- Too much time estimating and prioritizing.
- Lost momentum.
- Decision-making inefficiencies.
- Products consistently taking longer to release and costing more than expected.

AgileSparks solutions

- Leading SAFe workshop + Implementation Strategy Workshop with the leaders of the Product Development organization.
- Design and launch of an Agile Release Train (ART).
- SAFe Product Owners/Managers course.
- SAFe for Teams.
- Program Increment Planning.

Results

- Significant improvements in time-to-market.
- The ability to monetize product development faster.
- Deeper staff engagement and satisfaction.
- Momentum resulting from every part of the organization creating and investing in business objectives and working together to achieve them.



AgileSparks gave us the foundation to help us mature as a company. In business, a company continually evolves to meet new challenges but over the years, our development and product management processes became bloated, cumbersome, and we could feel the nimbleness slowly eroding away. We needed a way to involve multiple stakeholders and provide accountability to each other to create a unified path forward that was responsive to our customers. Make no mistake, Agile is not a pill that makes everything perfect overnight. It takes time and applied commitment from every level of the company, but if the commitment is there, I can't speak enough about the results I have witnessed."

Glen Demetriooff, President & CEO, RAPID RTC

CASE STUDY

Tabit - Improved quality, reduced time to market and enhanced ownership with Agile.

Tabit is a restaurant point of sale and table-side ordering system that streamlines restaurant operations, extends sales opportunities and increases restaurant owners' bottom line. The company's 360 degree integrated ecosystem connects every aspect of the customer experience, from guest management, customer ordering and productivity to table-side payment, bringing efficiencies to every interaction point.

The challenge

At the time of our engagement with Tabit, the company was experiencing rapid growth and was looking for ways to stay focused and aligned.

AgileSparks solutions

- Management sessions and coaching.
- Established cross-functional teams.
- Agile training.
- Revamped the implementation of Jira to support visibility of program & team levels.
- Decomposed requirements into refined Epics & Stories.
- Established Cadence of two weeks sprints.
- Reduced WIP and identified bottlenecks .
- "You build it, you own it" approach.

Results - after 6 months

- Deliver 20% more content with better quality.
- 50% improvement in time-to-market.
- Improved ownership.
- Improved alignment with the business needs.
- Ability to scale and recruit additional team/s.



*"What happens here in comparison to a few months back is **not less than a miracle**. We are producing significantly more and with higher quality. One of the most notable changes that AgileSparks helped us achieve is team ownership. People are engaged, take ownership and are proud to present in the demo. They feel more connected and involved and keep suggesting improvements in our retrospectives. I look forward to the continuation of our journey."*

Erez Ben David, V.P R&D

CASE STUDY

Intel CHD - Speeding up while increasing predictability.

Intel's CHD (connected home devices) group produces technology to enable service providers and equipment makers to offer more powerful, next-generation broadband, and in-home connectivity for more immersive experiences throughout the (smart) home.

The challenge

The group (~600 people) is highly distributed, with centers in the US, Germany, Poland, Israel, India, Singapore and Taiwan, which made alignment, planning and execution a huge challenge. As a result, it was hard to respond to changes, and there were many delays in the process and delivery was late and with poor quality.

AgileSparks solutions

- Management workshop - create common goals and vision, apply systems thinking.
- Create end-to-end visibility .
- ART launches.
- PI planning (Large solution) - preparation and coaching.
- Introduction of KPIs.
- Visibility.
- Coaching of managers and teams.
- Achieving Continuous Delivery.

Results - after 7 quarters

- Predictability (commit to delivery): 40% → 80%
- Velocity: +133%
- Quality (escaping bugs): -50%
- Customer support cases: -42%



Implementing Agile and in particular the Scaled Agile Framework allowed us to achieve significant improvements in all the goals we set to ourselves: Predictability, Speed (time to market) and quality. AgileSparks did a great job helping us move forward with this complex implementation across geographies and cultures, in the face of difficult impediments and skepticism. Their coaches in the US, Israel, Europe and India were instrumental in supporting our journey in Agile and SAFe, and I felt they not only understand what needs to be done, they found the way to move hearts and minds in the right direction. Working with AgileSparks was great. These guys know what they are doing and I highly recommend them to anyone interested in implementing Agile at scale."

Ronen Ezra
General Manager, CHD group
Intel



AgileSparks

Challenging your comfort zone

USA

Email: usa@agilesparks.com
Phone: +1-617-564-0455

Europe

Email: academy@agilesparks.com
Phone: +972-53-222-1473

India

Email: asi@agilesparks.com
Phone: +91-98237-87888