



# Developer Acceleration

A GUIDE



EBOOK

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## About Trek10

Founded in 2013, Trek10 was born with a single focus: to help clients move to and maximize Amazon Web Services. This is all we do... We concentrate 100% of our efforts on building a density of people and purpose within the AWS ecosystem. Designing, building, and supporting AWS workloads are table stakes for our team and as an outgrowth of that focus we have developed a superpower in the form of serverless computing. Guided by the [Trek10 Way](#), Trek10 clients trust our expertise, passion, and commitment to growing the AWS ecosystem - and it shows through in every aspect of our actions - from our brand, to our hiring practices, our commitment to open source intellectual property development, thought leading content, and most importantly, the spirit of collaboration with AWS to build and sustain this emerging ecosystem.



## About Developer Acceleration

- Developer Acceleration is a series of in-person Architect led training modules designed to ensure your team develops the skills and best practices necessary to achieve its high-priority business objectives through application modernization.
- The Trek10 Enterprise Architecture team will collaborate with you to design, scope, and deliver a multi-day engagement consisting of hands-on training designed to enable your organization to realize the tremendous innovation and value afforded by the AWS cloud ecosystem.
- The modules are crafted by our AWS Superheros and AWS Ambassadors with extensive main knowledge and real-world experiences. These same experts will deliver each module and allow your organization the opportunity to learn from some of the best and brightest in the AWS ecosystem.



## DA Offer at a Glance

Coupled with ongoing support packages, Developer Acceleration provides you with everything you need to accelerate your organization's journey to cloud native on AWS! Trek10 is providing an exclusive funding offer to accelerate qualifying customers through the Developer Acceleration Program.

- Trek10 is providing up to \$10,000 of funding to accelerate your journey through the Developer Acceleration Program.
- 4+ weeks of engagement
- Offer is valid and can be unlocked until June 30, 2024



## Developer Acceleration Benefits

Trek10 Developer Acceleration will provide your organization a personalized cloud enablement experience focused on the unique business and operational challenges currently facing your development teams. Additionally, you will have the opportunity to work alongside our AWS experts and set them to task on the architecture and implementation of your AWS workloads. Some notable use cases:

- Leaders who want to level-up their developers
- Development teams with goals to modernize applications and workloads
- Teams with monolithic applications that need modernization
- Companies with motivation to develop cloud-native applications
- Organizations with workloads on AWS



## How We Work

Trek10 will synthesize all whiteboard sessions, interviews, and discussions into an actionable game plan for realizing the application modernization and/or development strategy formulated throughout Phase 1 and 2 of the Developer Acceleration Program. In Phase 3, Trek10 will provide you with ongoing support that establishes the guidelines, code templates, and other relevant materials to help enable your developers to rapidly progress through their intended project. To proceed now to sign up for the Developer Acceleration Program offer, fill out the secure order form by clicking continue.



## How We Work

Here's What to Expect once the offer is submitted through the AWS Marketplace Order Form:

- A Trek10 Account Executive will reach out to you within 2 business days to schedule a call with your AWS Administrator to discuss the offer.
- Phase 1 - Multiple planning and review sessions with Trek10 Architects
- Phase 2 - 3 days of on-site training on modules chosen
- Phase 3 - Ongoing Project Support and 1 year of access to modules and training materials for all participants



## Choose from a variety of Developer Acceleration modules including, but not limited to topics like:

Application modernization  
via event driven  
application architecture

Release engineering and  
modern CI/CD best practices

Serverless application  
observability and security  
considerations

Multi-account  
organization design

Container orchestration systems

Cost optimization across  
your AWS accounts

Data analytics and  
machine learning

NoSQL database  
single-table design concepts

These options will provide your organization a personalized cloud enablement experience focused on the unique business and operational challenges currently facing your development teams. Additionally, you will have the opportunity to work alongside our AWS experts and set them to task on the architecture and implementation of your AWS workloads. accelerate your speed to market and customer outcomes.



# Developer Acceleration Use Cases

01

Leaders who want to level-up their developers

02

Development teams with goals to modernize applications and workloads

03

Teams with monolithic applications that need modernization

04

Companies with motivation to develop cloud-native applications

05

Organizations with workloads on AWS



## CASE STUDY

## Juniper Networks



## About Juniper

Juniper Networks is a company that prides itself on staying ahead of the curve, so it's no surprise they've been working with event-driven architectures and cases since before serverless became a hot trend.

However, after the introduction of AWS Lambda, AWS IoT Core, AWS Greengrass, and the broader adoption of serverless architectures, Juniper wanted to build world-class competency in the emerging serverless and IIoT (industrial IoT) ecosystems through best practice, enterprise-grade design patterns that have been tested at scale. That's what led Tommy to the Developer Acceleration workshop at Trek10.

## A World-class Team Needs a Common Vocabulary

Trek10 worked with Juniper to design a custom 3-day workshop, directly addressing the cutting-edge architectures Juniper was working with and the problems they were working to solve.

This shared experience and vocabulary, for Tommy, was a critical part of what the team got out of the workshop. Having a common vocabulary across the team made everyone's expectations clearer.

It made it easier to scope projects. When someone asked someone else to do something, they knew exactly what it meant and what it would take to get it done.

## After the Workshop: In It Together

Since the Developer Acceleration training, Juniper has noticed the support automation system team is pushing through new projects with confidence. There's an energy to the way everyone works together that can be felt throughout the team and seen in the quality of work.

Plus, the AWS serverless space is constantly evolving and changing. The Juniper support automation system team is heavily invested in IIoT, and some desirable AWS Greengrass features launched a couple of months after their workshop with Trek10.

With a constant stream of new services and change, Juniper is glad they have a solid foundation and cohesion as a team to move quickly on new opportunities. They continue to work with Trek10 for ongoing advanced engineering support, operationalization, and enablement to ensure the successful rollout of the support automation system.



## CASE STUDY

## Ovis Technologies



## About Ovis Technologies

Ovis Technologies provides boutique software solutions to the financial services industry, such as private equity, hedge funds, financial advisors, and family offices. In a highly-regulated industry like finance, rolling out custom, enterprise-grade software takes a deep level of regulatory knowledge and technical ability. Ovis is unparalleled in both regards.

Working in finance software has some unique challenges, which Ovis is always looking for better ways to solve. They are often working on tight budgets and tighter timelines. Their engineering team was excited about working with serverless and wanted to make sure they could onramp, and deliver to the client, as quickly and seamlessly as possible.

## From ELZ to Development Pipeline

Trek10 worked alongside Ovis in the early stages of the project via the Developer Acceleration program, a 2-3 day workshop during which Ovis would build out their development pipeline and think about the first functional pieces of their application.

During Ovis' workshop, the two teams thought holistically about testing and debugging functions on AWS Lambda, designing DynamoDB databases, and

integrating 3rd party services into their workflow. The Developer Acceleration workshop also gave Ovis the time and space to sit down and have more conversations about architecture, which helped them move swiftly through design decisions as a united team.

## Move Fast, Minimize Risk

With a new deployment pipeline in place, Ovis engineers got to work on the implementation, continuing to work alongside Trek10 for additional support when needed.

“We wanted Trek10 to join us as a natural extension of our team,” said Thomas Hradek, CTO at Ovis Technologies. “Someone to talk through design questions with us and prevent us from encountering any unknown unknowns so our team could keep pushing forward. We got that, and so much more.”



# Additional Resources



## All Available Modules

### Foundational AWS Acceleration: Organizational Layout

If you're new to AWS, this "landing zone" experience is a great introductory module. We'll help you build out an AWS Organization, review core IAM and network security concepts, and set you up for future success in the cloud.

### Foundational AWS Acceleration: CI/CD

Continuous integration and delivery are the backbone of a cloud native development shop. In the AWS world, that means getting savvy with CodePipeline, CodeBuild, and CodeCommit. We'll show you some awesome best practices, including our legendary dynamic feature branch pipelines, and reinforce the importance of CloudFormation as the Infrastructure-as-Code tool underlying all the serverless goodness to come.

### Serverless Acceleration: Intro to Serverless

We know, serverless still has servers. What it doesn't have is a clear definition everyone can agree on. In this overview session, we'll get your team up to speed on the development and operational benefits of a serverless-first approach, and the rationale for an architecture built on "cloud-native" managed services. We'll even mention the "c" word -- containers. As with all our sessions, there will be plenty of time for Q&A with our opinionated experts. (Just don't throw anything at us.)

### Serverless Acceleration: Project Layout

Don't just lift and shift your app to create a "server in a function"; getting the most out of serverless requires a whole new approach to code layout and application architecture. In this session, Trek10 will help you make sense of modern tools like the Serverless Framework and AWS's Serverless Application Model, address the thorny monorepo vs multiple repo question, demonstrate Lambda code and dependency best practices (routing, logging, environment variables, what code goes in a function handler), and much more. You'll get all the code examples when we're done!

### Serverless Acceleration: Testing and Debugging

How do you test an application made up of cloud services? There's no easy answer, but Trek10 will walk you through tried and true tools and best practices including local function execution, IDE plugins for serverless, and even cloud-native coding. Let us show you how to reduce latency and frustration in your development cycles while ensuring that what gets tested is actually what you want to deploy. You'll get all the code examples when we're done!



### Serverless Acceleration: Migrating Legacy Architectures

How do you turn a monolithic, on-premise application into a flexible architecture that takes full advantage of the cloud? In this session, we'll cover some best practices for migrating data and converting legacy architectures to serverless, but the real value comes when we unpack your specific migration use cases and identify the cloud services and architecture patterns that will simplify your move to the cloud. Bring a whiteboard and prepare to have your assumptions challenged.

### Serverless Acceleration: Security

With great serverless power comes great responsibility, and it's up to you to make sure your serverless apps follow security best practices. The Trek10 team will dive into least-privilege access design, help you right-size your Lambda functions, review best practices for dependency and secrets management, and introduce you to some remarkable third-party tools that can take your security posture to the next level. You'll get all the code examples when we're done!

### Serverless Acceleration: Release Engineering

In this module, Trek10 will show you how to deploy and update serverless applications in production with zero downtime. We'll look at safe Lambda deployments and rollbacks with SAM and CodeDeploy, DNS-based failover with multiple CloudFormation stacks, versioning shared libraries

with Lambda Layers, and managing shared application components with the Serverless App Repository. You'll get all the code examples when we're done!

### Serverless Acceleration: Monitoring and Observability

There's no "SSH" in serverless, but you can still use best practices to keep tabs on how your applications are running in production. (Hint: we don't just mean squinting at CloudWatch Logs.) We'll look at monitoring and observability best practices involving AWS CloudWatch and X-Ray, introduce you to third-party tools such as IOPipe, Epsagon, and Datadog, and help figure out what to do when your tools aren't helping. You'll get all the code examples when we're done!

### Serverless Acceleration: API Design

AWS offers several intriguing ways to build a fast, cost-effective API without any servers at all. But the "classic" API Gateway -> Lambda -> DynamoDB design is only the beginning. We'll walk you through advanced REST API designs (did you know you can put a Lambda function behind an application load balancer?), show you the power of AWS AppSync for managed GraphQL back ends, and even dig into AWS's new websocket capabilities for CloudFront and API Gateway.



### Serverless Acceleration: Serverless Data Stores

Data is the beating heart of your serverless application, and we're here to make sure you get it right the first time. DynamoDB, the "granddaddy" of fully managed data stores, will get a workout as we demonstrate patterns and antipatterns for serverless architectures. If you prefer SQL in your life, we'll dive deep on the performance and security considerations of Aurora Serverless and its new data API. We'll also pull some surprising power from the depths of good old Amazon S3.

### Serverless Acceleration: Gotchas and Pain Points

We love serverless as much as anyone, but we'll be the first to agree there are plenty of challenges when it comes time to apply it in the real world: cold starts, stateful connection issues at scale, microservices sprawl, cost considerations, time and space constraints, and probably two more things you just ran into. We'll lay out plenty of mitigations and workarounds to keep you moving forward -- and more importantly, we'll let you know when to panic. (Don't panic. You can do this!)

### Serverless Acceleration: Architecture Patterns

Trek10's experts have built leading-edge serverless architectures for some of the world's largest cloud-native companies, giving us unparalleled insight

into serverless architecture patterns that work and perform at scale. In this advanced session, we'll dive into function fan-out and fan-in, workflows and long-running tasks, asynchronous and synchronous APIs, real-time streaming, crossaccount service discovery, and more.

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[Juniper Networks Builds a World-Class Serverless Team with Trek10 Developer Acceleration](#)

[Ovis Technologies and the Risk vs. Reward of Serverless in Finance](#)

[Learn more about Trek10 Developer Acceleration!](#)





To learn more about migration visit:  
<https://trek10.io/daebook>

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