



# Gain Business and Technical Competitive Advantages with Serverless Computing Enabled by Amazon Web Services & PROTOS Technologie GmbH

## What is a Serverless Application?

Serverless computing allows you to build and run applications and services without thinking about servers. Serverless applications don't require you to provision, scale, and manage any servers. You can build them for virtually any type of application or backend service, and everything required to run and scale your application with high availability is handled for you. Companies that build serverless applications get faster time-to-market because the core infrastructure components, like compute and databases, are offered as fully managed services by AWS. These companies also experience reduced infrastructure costs since serverless applications don't require you to pay for idle server capacity.

Serverless applications are built using fully managed services like AWS Lambda, Amazon API Gateway, Amazon DynamoDB, Amazon S3, AWS Step Functions, and Amazon Kinesis.

## Serverless Architectures

The PROTOS Technologie mindset is Cloud First. Depending on the specific circumstances of an IT environment, serverless solutions from PROTOS Technologie offer a maximally flexible architecture. These solutions are scalable, fault-tolerant, and responsive. We connect services like AWS Lambda, S3, DynamoDB, API Gateway, and many more to build resilient and scalable infrastructures.

So far, we've built applications like serverless websites with enterprise-ready access scenarios, Prowler (AWS CIS Benchmark), or Log-Streaming and analysis tools on serverless, fully-managed services like S3, AWS Lambda, API Gateway, Cognito, or Kinesis.

## Common Use Cases



WEB APPS AND SERVICES



MOBILE BACKENDS



IOT BACKENDS



DATA PROCESSING



CHATBOTS



IT AUTOMATION

## Focus on Innovation, Not Operating Servers

AWS and APN Partner PROTOS Technologie GmbH provide organizations with the building blocks to develop and run serverless applications on the AWS Cloud. By using AWS's serverless platform, organizations can eliminate the time and expense associated with provisioning and managing servers, including patching and configuration, administering databases, installing security updates, scaling, etc. This enables organizations to improve their operational efficiency, refocus engineering resources on product innovation, and establish faster time-to-market.



## Components of the AWS Serverless Platform

### COMPUTE

[AWS Lambda](#) lets you run code without provisioning or managing servers. You pay only for the compute time you consume - there is no charge when your code is not running.

### SYSTEMS MESSAGING

AWS managed services make it easy to decouple and scale microservices, distributed systems, and serverless applications. For interprocess messaging, users can leverage [Amazon SNS](#) as a pub/sub messaging service, and [Amazon Simple Queue Service \(Amazon SQS\)](#) for message queuing.

### STATE MANAGEMENT

[AWS Step Functions](#) makes it easy to coordinate the components of distributed applications and microservices using visual workflows.

### DATABASES

[Amazon DynamoDB](#) is a fast and flexible NoSQL database service for all applications that need consistent, single-digit millisecond latency at any scale.

### STORAGE

[Amazon Simple Storage Service](#) (Amazon S3), provides developers and IT teams with secure, durable, highly-scalable object storage.

### DEVELOPER TOOLS

AWS provides tools and services that aid developers in the serverless application development process. AWS and its partner ecosystem offer tools for continuous integration and delivery, testing, deployments, monitoring and diagnostics, SDKs, frameworks, and integrated development environment (IDE) plugins.

### ANALYTICS

[Amazon Kinesis](#) enables streaming data on AWS, offers powerful services to make it easy to load and analyze streaming data, and provides the ability to build custom streaming data applications. This data can then be published to Amazon S3 and queried by [Amazon Athena](#), a serverless interactive query service for standard SQL.

### API PROXY

[Amazon API Gateway](#) is a fully managed service that makes it easy for developers to create, publish, maintain, monitor, and secure APIs at any scale.

### DIAGNOSTICS

[AWS X-Ray](#) helps developers analyze and debug production, distributed applications, such as those built using a microservices architecture.

## Some of our Solutions

**Prowler:** is a command-line tool for AWS Security Best Practices Assessment, Auditing, Hardening, and Forensics Readiness Tool. It follows the guidelines of the CIS Amazon Web Services Foundations Benchmark (49 checks) and has more than 100 additional checks.

**Serverless Selfservice:** Enterprise-ready web application that enables users to self-assign resources like printers or network shares.

<https://www.protos-technologie.de/>

**PROTOS Technologie GmbH [Partner Resources & Info URLs]:**  
<https://www.protos-technologie.de/en/our-services/serverless-microservices/>  
<https://www.protos-technologie.de/en/2020/06/09/introduction-into-aws-lambda/>

**Additional Resources & Info:**  
<https://aws.amazon.com/serverless/>  
<https://aws.amazon.com/serverless/developer-tools/>