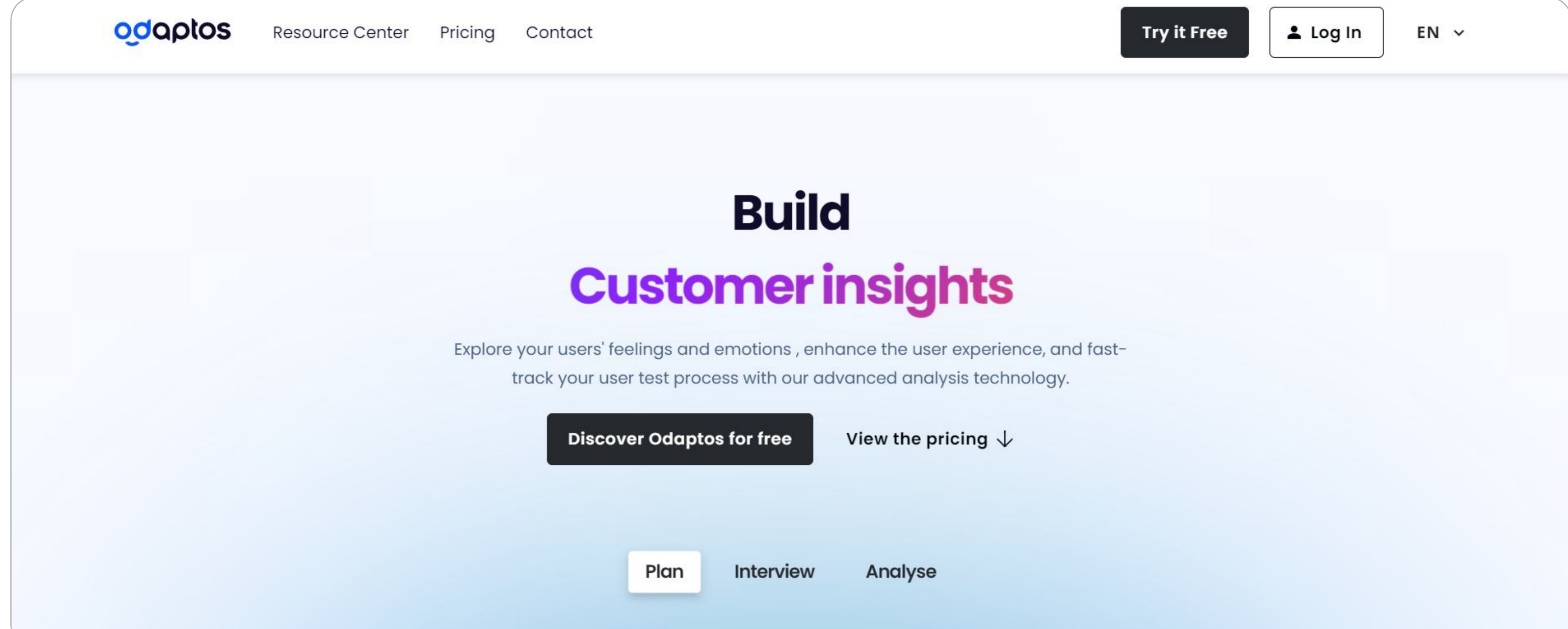


# Odaptos' Path to Scalable AI-Driven User Testing

Odaptos is transforming the way companies understand their users. Their innovative platform goes beyond traditional user testing – it incorporates AI-based emotional analysis. Odaptos captures and interprets users' emotions during interviews, giving businesses a much clearer idea of the user experience.

The platform's smart video player breaks down the videos into key moments, highlighting where users face difficulties and, most importantly, how they feel during these moments. This combination of functional and emotional insight gives companies a clearer picture of what works and what doesn't in their products or services.



## Project Description

Odaptos came to IT Outposts with an infrastructure primarily built on Lambda functions. Their entire system was made up of scripts running different tasks. However, as the company aimed to scale and integrate new services, they recognized the need for a more robust and flexible infrastructure. The client's objectives are to fine-tune their existing setup and prepare for future growth.

**Save time in your UX tests with Artificial Intelligence.**

Easily integrate Odaptos, a leading user testing platform, to bypass manual testing and instantly translate user reactions into essential insights.

**Pinpoint friction points through user testing and precise emotional analysis.**

Understand not only where your users face challenges, but also how they feel in those moments. Odaptos identifies friction points by analyzing user experience testing, all while maintaining top-notch data security.

## Work agenda

**Client**  
Odaptos

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**Location**  
France

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**Technical team**  
1 DevOps engineer  
1 SRE engineer  
Project manager

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**Project timeframe**  
August 2024 - ongoing

**Project goals**

- Resolve intermittent 503 errors to improve reliability and user experience
- Transition from a Lambda-centric infrastructure to a more flexible, container-based solution using Amazon ECS
- Implement a cost-effective, dynamic GPU-enabled processing system for AI model integration
- Consolidate multi-cloud services, focusing on migrating to Whisper for comprehensive speech recognition
- Configure client-specific encryption for video uploads and conduct a thorough security audit
- Design a scalable, microservices-based architecture to support Odaptos's future growth

## Tasks and Challenges

<b>01</b>	<b>Resolving intermittent 503 errors</b>	Odaptos was experiencing periodic 503 errors that were causing significant downtime. Our team quickly identified the root cause of these errors and resolved the issue within a day. This made the platform way more reliable and better for users.
<b>02</b>	<b>Transitioning from Lambda-centric architecture</b>	The existing Lambda-based infrastructure has limitations in terms of scalability and flexibility, particularly for running GPU-intensive tasks. We're gradually moving critical processes from Lambda functions to a more versatile container-based solution using Amazon ECS.
<b>03</b>	<b>Implementing GPU-enabled processing</b>	Odaptos aims to integrate AI models that require GPU capabilities, but the expense of continually operating GPU-enabled instances is too high. To address this issue, our engineers created a system that automatically activates GPU-enabled machines as needed, runs the required tasks, and then powers them down. This greatly lowers costs while providing the essential processing power.
<b>04</b>	<b>Multi-cloud service optimization</b>	Another challenge Odaptos currently faces is their reliance on multiple cloud providers for various services. They use certain services from Amazon, others from Azure, and yet others from Google.  This multi-cloud approach was necessitated by specific capabilities offered by different providers. For instance, Azure provides French language translation, a feature not available in Amazon's offerings. However, this not only increases the complexity of infrastructure but also potentially raises costs.  The client wants to migrate their services to Whisper, a more comprehensive speech recognition system. This step will simplify their infrastructure and potentially reduce expenses.
<b>05</b>	<b>Enhancing security measures</b>	Odaptos places a high priority on data security and wants to implement client-specific encryption for video uploads. We're configuring a system using Key Management Service (KMS) to generate unique encryption keys for each client. In addition, our team will perform a thorough security review to verify best practices are followed across their entire infrastructure.
<b>06</b>	<b>Preparing for future scalability</b>	The current setup, while functional, isn't easily scalable to meet Odaptos's growth targets. IT Outposts is currently designing a roadmap to migrate their infrastructure to a more scalable, microservices-based architecture.

## Results

Our collaboration with Odaptos has yielded major results. We've addressed their urgent infrastructure challenges, and the improvements are evident: their system is now operating more smoothly. However, we're not focused on temporary solutions only. Our team understands that Odaptos has ambitious goals for the future, and we're preparing for the next big steps.

## DevOps tech stack

EC2

VPCs

Lambda

ECS

ECR

Cloud Formation

CloudFront

CodeBuild

KMS

Event Bridge

Secret Manager

Certificate Manager

SQS

GCP

AWS

MongoDB

Github