Financial Governance for Cloud-Based Classes

Bar-Ilan University

> *"Cloudride's solution was tailored to our budget needs, ensuring we stayed within our limits while helping all the students use our resources wisely and achieve their goals."*
>
> **Prof. Erez Levanon.**

ABOUT BAR ILAN UNIVERSITY

Bar-Ilan University has been Israel's fastest-growing university for six consecutive years.

The Institute serves more than 20,000 students nationwide and abroad daily.

The university is proud to be the academic home of 24 Israel Prize laureates, alongside numerous researchers who have earned international awards and recognition.

GOAL

Bar-Ilan University needed a dedicated system to maintain financial governance over classroom budgets, a critical concern for universities. For example, students in coding classes required access to cloud-based instances for writing and running code. To ensure they stay within their budget, Cloudride calculated the hourly cost for each running instance and allocated usage hours per student based on the overall class budget, while controlling the instances' uptime to prevent overages.

CHALLENGES

- **Financial Governance**
How can the Professor's assistant gain control over each student's budget?
- **Off-the-Shelf Solution**
No specific "Cloud Native" solution was found.
- **Development Budget**
Developing a solution at minimal costs due to a lack of dedicated resources.
- **Operational Costs**
The solution needed to be implemented with minimal ongoing operational costs.

THE BUDGET-CONTROLLED SYSTEM ENABLED BAR-ILAN UNIVERSITY TO MANAGE CLOUD RESOURCES EFFICIENTLY WHILE STAYING WITHIN BUDGET, ENSURING STUDENTS HAD SEAMLESS ACCESS TO CLOUD-BASED LABS/CLASSES.

aws partner network

CLOUDRIDE

THE SOLUTION

To meet Bar-Ilan University's need for budget-controlled AWS access for students, we tailored a solution utilizing the Amazon EC2 service.

Students logged in via a VPN using their email, which served as the gateway to their allocated instance. To activate their personal instance, students executed a specific SSH command. Upon logout, the instance was automatically powered down to avoid unnecessary costs.

The system tracked time-based usage in near-real time, allocated 50 hours per student, and provided detailed usage reports. Designed from scratch, the solution supported over 50 students, maintained the budget, and reduced overall costs while ensuring efficient resource management and financial governance.

TECNICAL EXECUTION

The technical execution involved designing a custom system based on both Infrastructure as a Service (IaaS) and Software as a Service (SaaS) within the AWS technologies stack platform: Amazon EC2 for virtual servers, Amazon S3 for storage, AWS Lambda, AWS Secret Manager and AWS System Manager. To allow data-security regulations, Cloudride deployed AWS CloudTrail, AWS CloudWatch, and AWS Key Management Service(KMS)
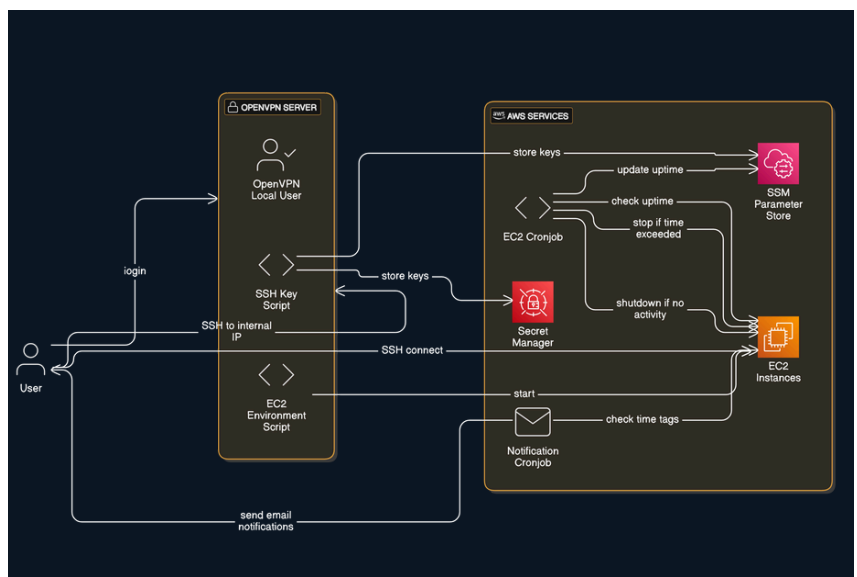
This included:

- **Custom Development:** The system was built from scratch, leveraging in-depth expertise to meet the university's budget constraints and operational requirements.
- **Automated Resource Management:** Instances were programmed to start and stop automatically based on user login and logout, optimizing costs and ensuring efficient usage.
- **Real-Time Tracking:** Usage was monitored in real-time, allowing for budget tracking and preventing potential overages.

The system was designed and implemented by Cloudride's CTO, Mr. Ronen Amity, who used advanced programming and architectural expertise to allow the delivery of a tailored, cost-effective solution for Bar-Ilan University.

Financial Governance for Cloud-Based Classes

KEY TECHNOLOGIES USED

AWS Lambda **AWS Secret Manager** **Amazon S3** **Amazon EC2** **Amazon CloudWatch** **SSM Parameter Store** **AWS CloudTrail**
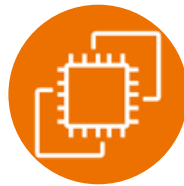
RESULTS

The successful implementation of the budget-control system for Bar-Ilan University sparked interest in future projects. The system provided effective financial governance, enabling students to use cloud resources within budget limits. Real-time tracking and automated management ensured precise cost control, while tailored resource allocation allowed students to focus on academics. This approach empowered Bar-Ilan University to confidently expand its use of cloud technology while maintaining full financial governance and oversight.

Customer Obsession **Financial Governance**

> *The collaboration with Bar-Ilan University was an inspiring journey. It encouraged us to explore innovative solutions, applying our customer-back approach to address their budget needs and unique challenges.*

Danny Lev-Ran
CEO, Cloudride

FUTURE DIRECTIONS

Building on the success of its budget-controlled system, Bar-Ilan University has requested a similar solution for the next student cohort. Cloudride is incorporating enhancements like advanced analytics and predictive budgeting tools for greater financial oversight and agility. Future developments will focus on scalability to support larger student groups and complex cloud-based labs. Cloudride plans to refine the system into an off-the-shelf product, offering customers an innovative solution that maximizes efficiency while ensuring strict budget control.

aws partner network

CLOUDRIDE

Financial Governance for Cloud-Based Classes

Bar-Ilan University
אוניברסיטת בר-אילן

REACH OUT

PHONE NUMBER
+972-79-300-1490

HEADQUARTERS
24 Raoul Wallenberg St.
Tel Aviv, Israel 6971920

EMAIL ADDRESS
info@cloudride.co.il

BLOG
https://www.cloudride.co.il/blog

LINKEDIN
Cloudride

FACEBOOK
@cloudride2

X
@cloudride_il

QUORA
https://qr.ae/pGTdiZ

aws partner network

CLOUDRIDE