

# Data Analytics Virtual Labs in Cloud to Drive Classroom Training and Scientific Research Needs for a Leading Global University

The National University of Singapore (NUS), a leading global university was looking out for an enterprise-wide Data Science platform. The primary requirement of this platform was for Training and Research needs in a simple and cost-effective manner for students & faculty with tight controls.

Relevance Lab helped NUS to achieve this by onboarding them to the “Research Gateway (RG), a cloud-based platform built on AWS. The choice of Relevance Lab was driven by a “solution-oriented” focus, which helps the customer needs than just providing a Self-Service portal for cloud consumption. The platform provided customer-specific feature enhancements and a proactive approach of hand-holding end users during the onboarding process & training. With tight controls on product catalog, size of instances, daily cost tracking and proactive budget notifications, the entire process of running semester-based classroom virtual labs and research programs became frictionless.

## Challenges

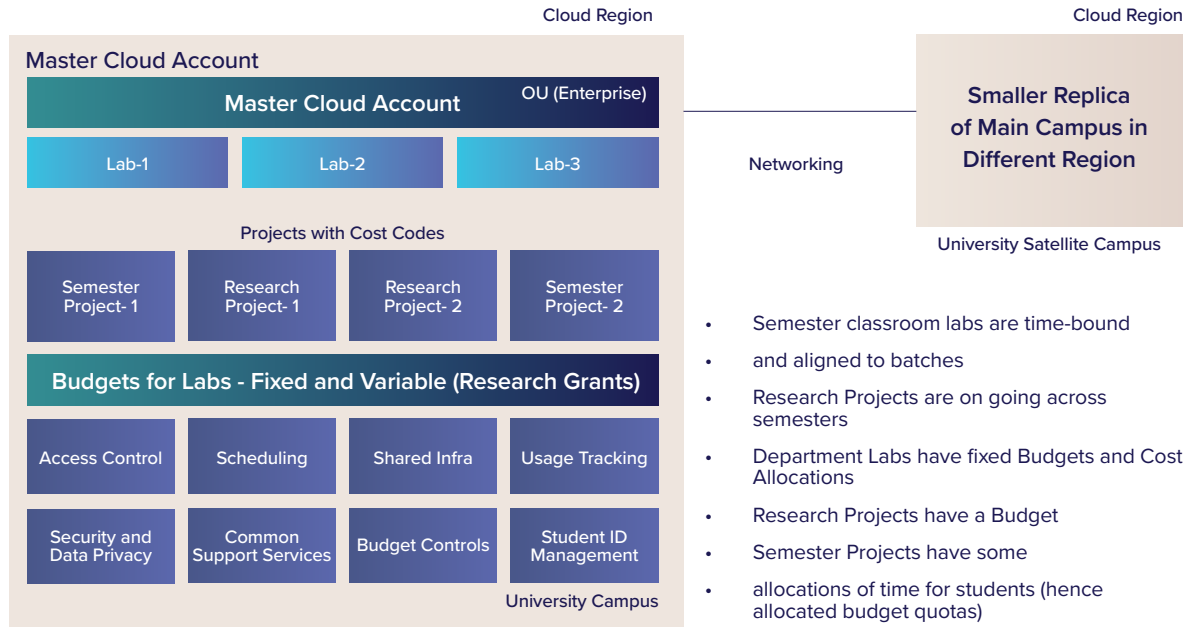
- Creation of virtual labs for every semester training was a cumbersome process.
- Lack of visibility on the spend by the students for the training.
- Adoption of AWS best practices were missing.
- Lack of Budgets and Cost tracking.

## Approach

- Set up a Classroom Lab for Training and Scientific Research needs using RG.
- Provide a tenant where faculty members can manage classroom projects, datasets, users, and systems with minimum effort.
- Onboard students on RG SaaS Solution via bulk import and assign them to relevant Classroom/Curriculum Labs (based on Professor approvals).
- Create custom Catalog, which includes products like – AMI with preinstalled Docker, MySQL, Analytical tools – RStudio, Jupyter Notebook, Jupyter Lab.
- Enterprise-grade controls on Budget, Students/Instructors Access, Data Security, and Approved Products Catalog.
- Fixed Budgets per Classroom Lab and Student with automated systems to track and measure the consumption.
- Professors and Students using these Labs and Research Projects will be governed periodically for ensuring Security and Compliance.
- Notified Professors and Students on reaching the budget limit.

# Data Science Classroom Lab in Cloud Driving Frictionless Research

Head of Department  
(Professor).



## Solution

“Research Gateway” provided researchers with one-click access to collaborative computing environments operating across teams, research institutions, and datasets. This also enabled internal IT stakeholders to provide standard computing resources based on a Service Catalog. They were able to manage, monitor, control spending, apply security best practices, and comply with corporate governance.

## Benefits of “Research Gateway”

### Standard Research Needs

- Roles, Workflows, Research Tools, Governance, Access and Security, Integration
- People-Programs-Resources Interactions
- Intramural and Extramural Research
- Infrastructure, Applications, Data, and Analytics

### Built on Cloud

- Easy to deploy, consume, manage, and extend – should align with existing infrastructure, applications, and cloud governance
- Leverage AWS Research products

### SaaS and Enterprise Deployment

- Supports both Self-hosting and Managed Hosting options
- Cost effective with pre-built IP and packaged service offerings

## Outcomes

- Enabling Scientific Research on AWS Cloud with Self-Service Cloud Portal.
- Cost & Budget tracking controls with data security.
- Solving customer needs for Research and Virtual Training Labs in Cloud.

## Customer Feedback

“We have been very pleased with the solution from Relevance Lab that has helped us leverage AWS Cloud effectively to run our Data Science Virtual Classroom labs effectively. The flexible and proactive support from Relevance Lab teams have made the entire experience very positive and we plan to scale the adoption to new faculty & classrooms for ongoing programs. The key highlights of the solution have been a flexible catalog, tight cost controls & notifications, and a light-weight solution that allows us to run the virtual labs with an efficient cloud adoption model in a self-service capacity.”

## About Relevance Lab

Relevance Lab is a next-generation technology services company — **Born in the Cloud, Transformed by Data, and Re-Imagined for GenAI**. We help enterprises cut through the noise of rapid AI adoption by focusing on business outcomes, building on enterprise-grade foundations, and partnering through every step of their AI journey. With deep cloud expertise, strong product engineering DNA, and proven platforms in DevOps and Research Computing, we enable organizations to drive frictionless business and confidently evolve into truly AI-Powered Enterprises.