Original page: https://cloudskillsboost.google/paths/32 (https://cloudskillsboost.google/paths/32)

Google Cloud

Google Cloud

(/)

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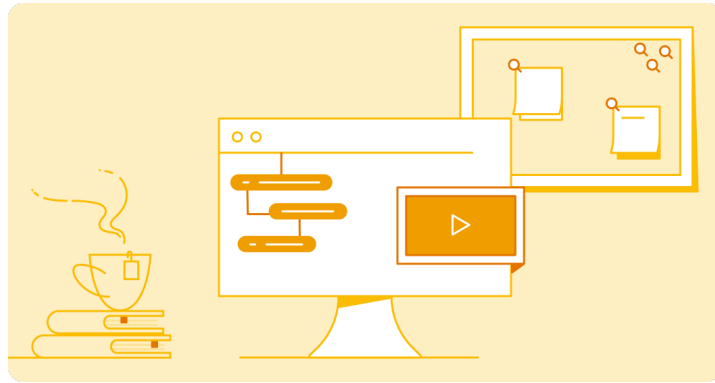Apply your skills in Google Cloud console

Google Cloud Next 2022 Hands-On Labs

school 58 activities   update Last updated almost 3 years   person Managed by Google Cloud

This learning path contains labs that provide hands-on activities related to breakout session content and launches announced at Google Cloud Next 2022.

Start learning path

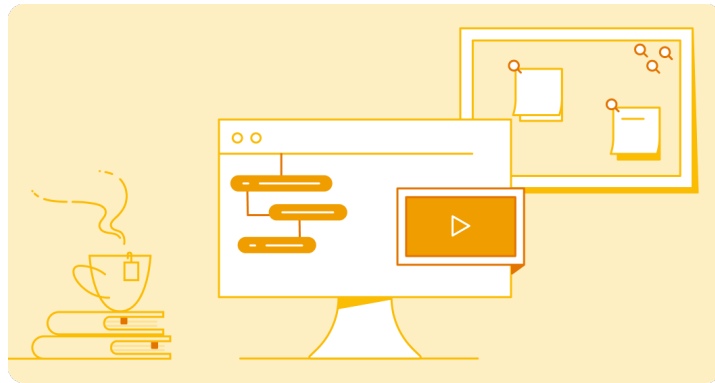# 01 Getting started with Flutter Development

book Lab
access_time 1 hour
show_chart Introductory

Build and edit a Hello World Flutter application using a Code Server development enviornment.
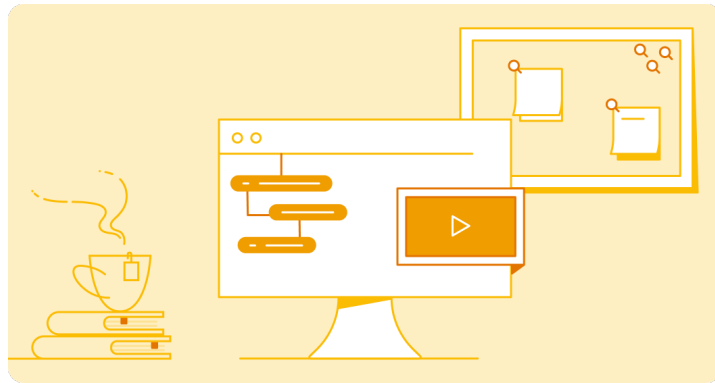
Start lab

(/focuses/18214?parent=catalog&path=32)

02 Flutter Startup Namer

book Lab
access_time 1 hour
show_chart Introductory

This lab walks you through writing your first Flutter app compatible for Android, iOS, and web.

Start lab

(/focuses/18217?parent=catalog&path=32)

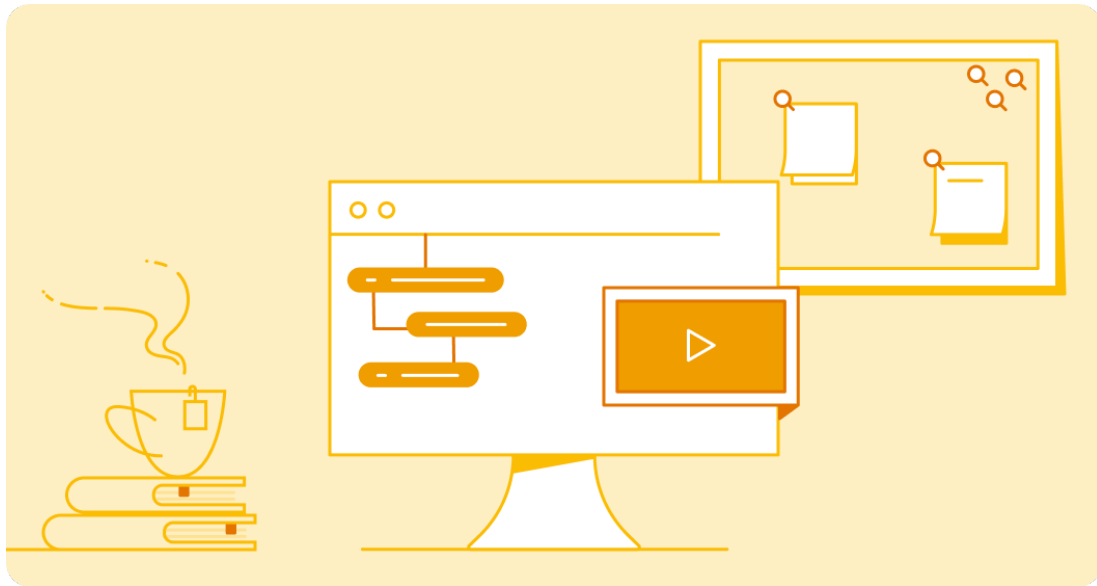# 03 Material Components for Flutter Basics

book Lab
access_time 1 hour
show_chart Introductory

Design a basic frontend for a mobile app using Material Components for Flutter.
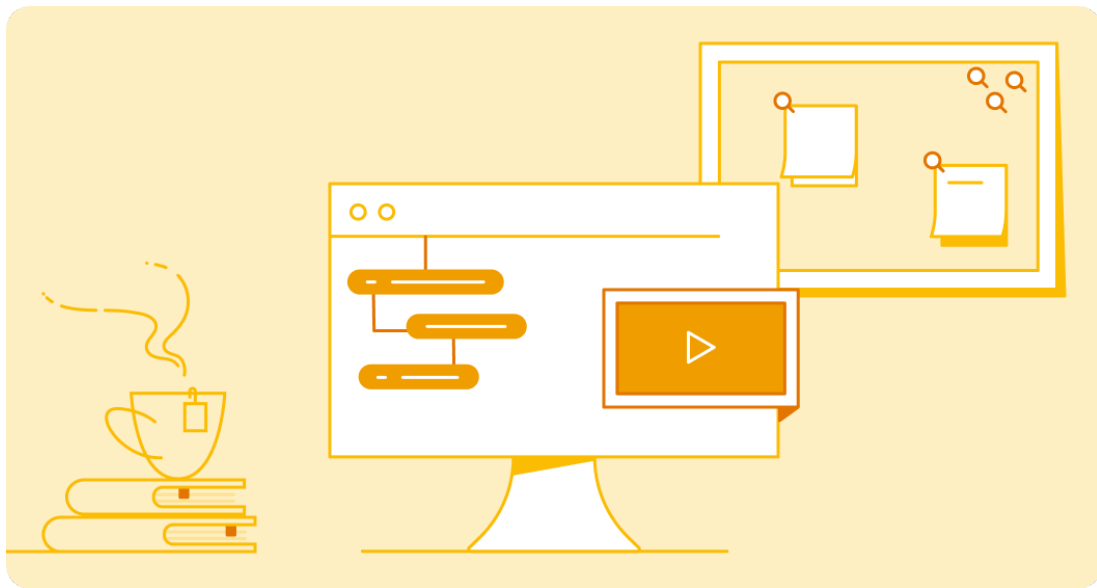
Start lab

04 [DEPRECATED] Flutter Web and Firebase Authentication

book Lab
access_time 1 hour
show_chart Introductory

This lab demonstrates how to use Firebase Web authentication in a Flutter application.

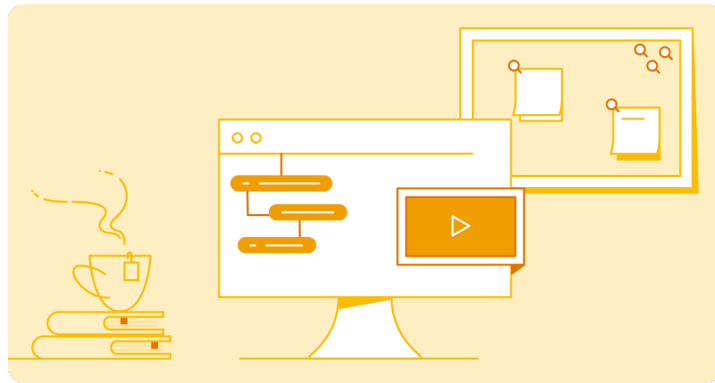Start lab

05 [DEPRECATED] Dart Functions Framework

book Lab
access_time 1 hour
show_chart Introductory

Explore using Dart Function Frameworks in a Flutter application. Example based on this demo.

Start lab

(/focuses/28825?parent=catalog&path=32)
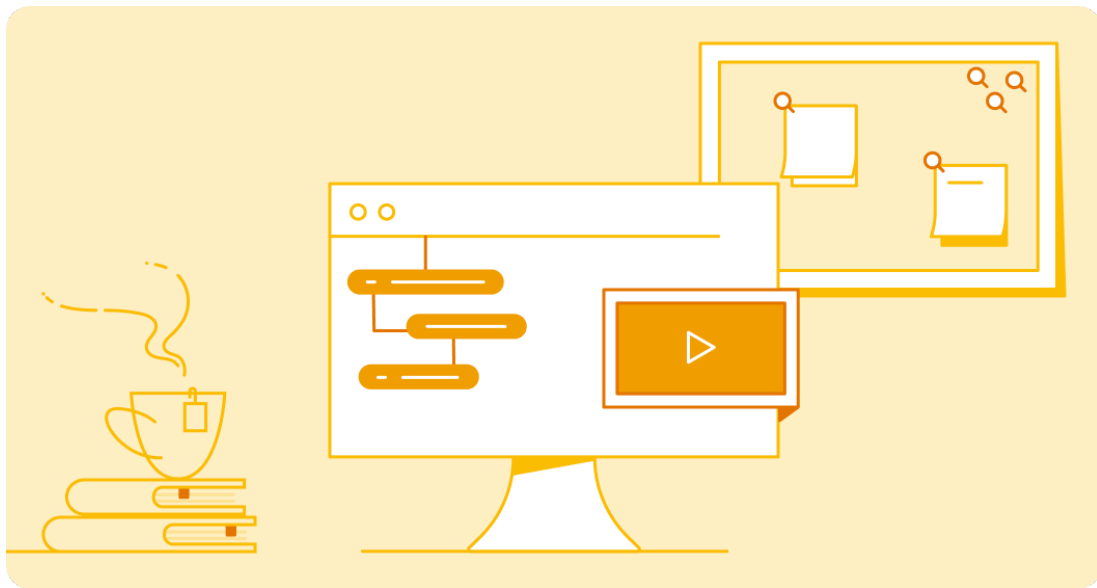
06 Introduction to Dart

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab you will learn the basics of Dart. Understand how to work with variables, flow control and functions to start your journey with Dart.

Start lab

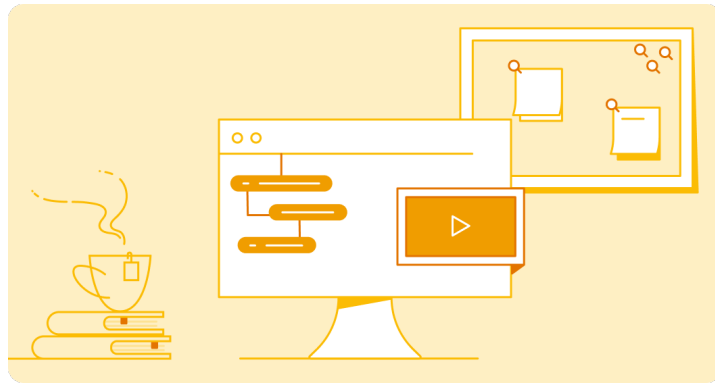# 07 [DEPRECATED] Dart: Using Functions with Lists and Maps

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab you will learn how Dart is used with data structures. Understand the utility of Maps and Lists and how these are used to reference information.

Start lab

(/focuses/14662?parent=catalog&path=32)

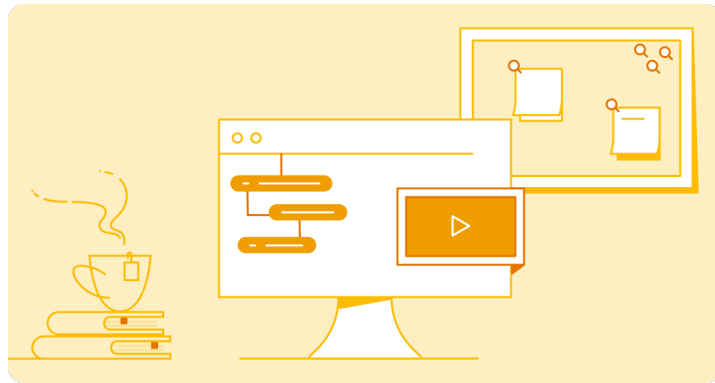# 08 Developing a REST API with Go and Cloud Run

book Lab
access_time 1 hour
show_chart Intermediate

Demonstrate how to build a REST API with Go and Cloud Run

Start lab

(/focuses/15657?parent=catalog&path=32)
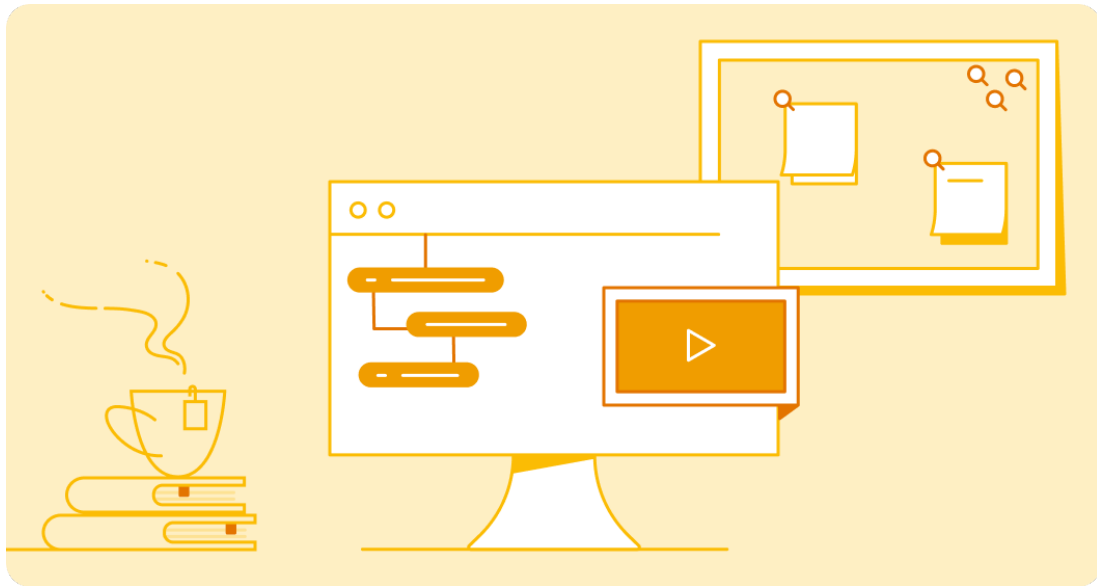
09 Eventarc for Cloud Run

book Lab
access_time 1 hour
show_chart Introductory

In this lab you will use Eventarc for Cloud Run to listen to events from Cloud Pub/Sub and Audit Logs. At the end of this lab you will be able to deliver events from various sources to Google Cloud sinks.

Start lab

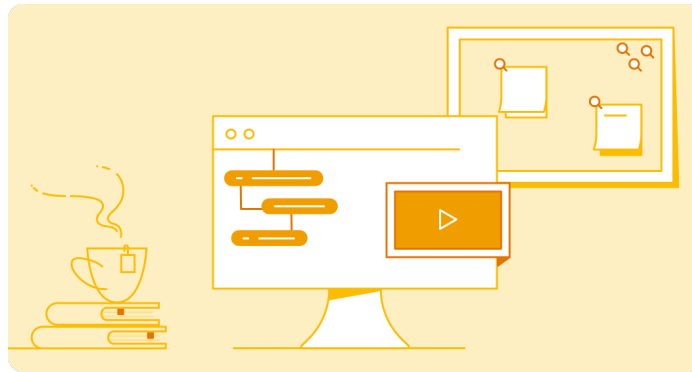# 10 [DEPRECATED] Managing Cloud Run gRPC Services with API Gateway

book Lab
access_time 1 hour
show_chart Intermediate

In this lab you learn how to set up API Gateway to manage and secure a Cloud Run backend service with gRPC.

Start lab

(/focuses/8390?parent=catalog&path=32)

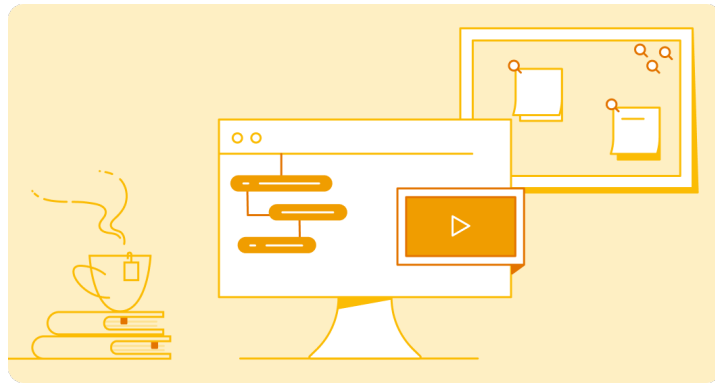# 11 Build a Serverless App with Cloud Run that Creates PDF Files

book Lab
access_time 1 hour
show_chart Intermediate

In this lab you will build a PDF converter web app on Cloud Run, a serverless service, that automatically converts files stored in Cloud Storage into PDFs stored in segregated folders.

Start lab

(/focuses/10445?parent=catalog&path=32)

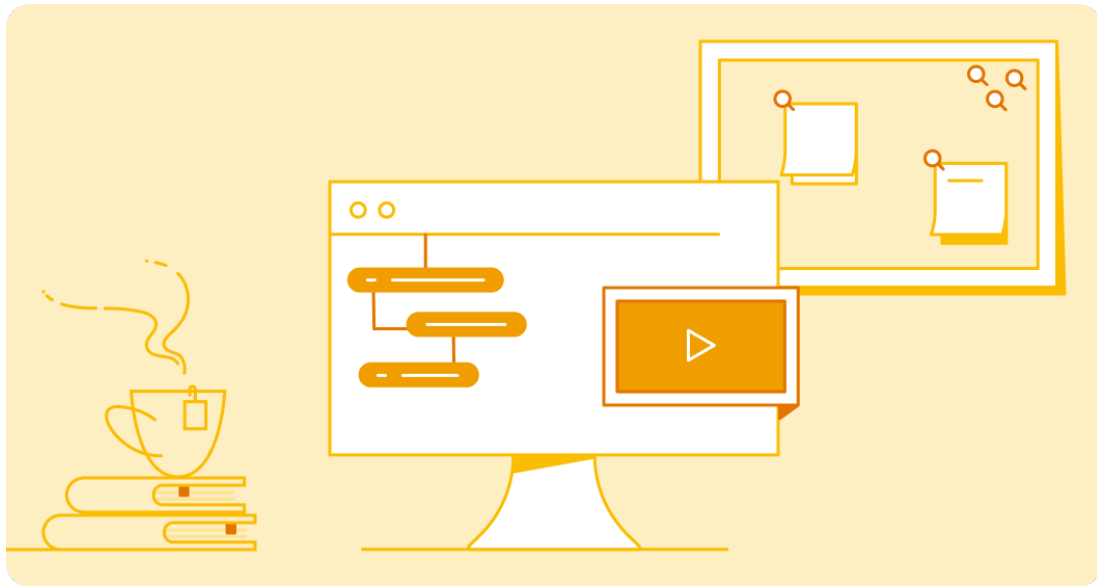# 12 Deploy Your Website on Cloud Run

book Lab
access_time 1 hour
show_chart Introductory

In this lab you will deploy a website to Google Kubernetes Engine, scale it out to more instances, then deploy a new version using rolling updates.

Start lab

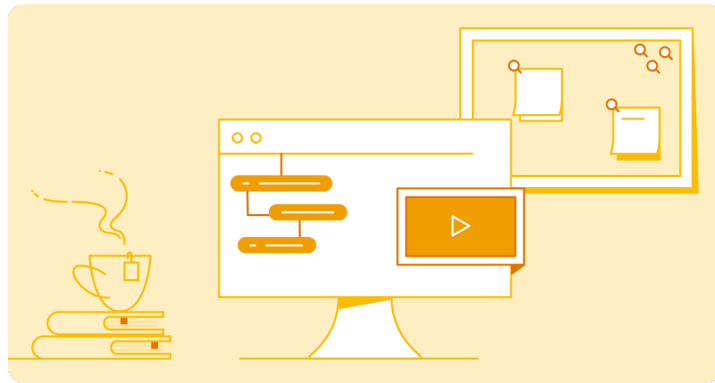# 13 [DEPRECATED] Automate Validation using the Data Validation Tool (DVT)

book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

Data validation is a critical step in data warehouse, database, or data lake migration.

Start lab

(/focuses/37985?parent=catalog&path=32)
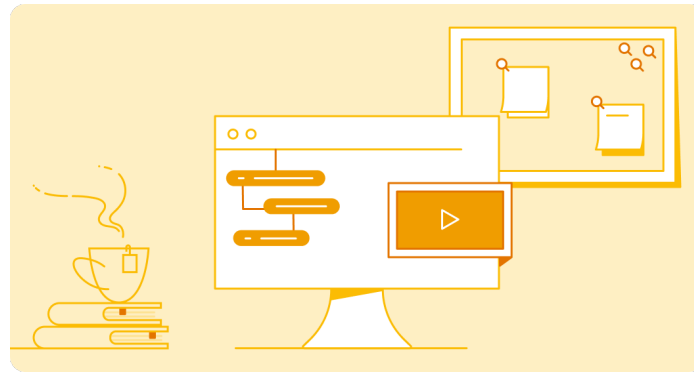
14 BigLake: Qwik Start

book Lab
access_time 45 minutes
show_chart Introductory

In this lab, you will learn how to implement BigLake tables.

Start lab

(/focuses/1841?parent=catalog&path=32)

15 Detect Labels, Faces, and Landmarks in Images with the Cloud Vision API
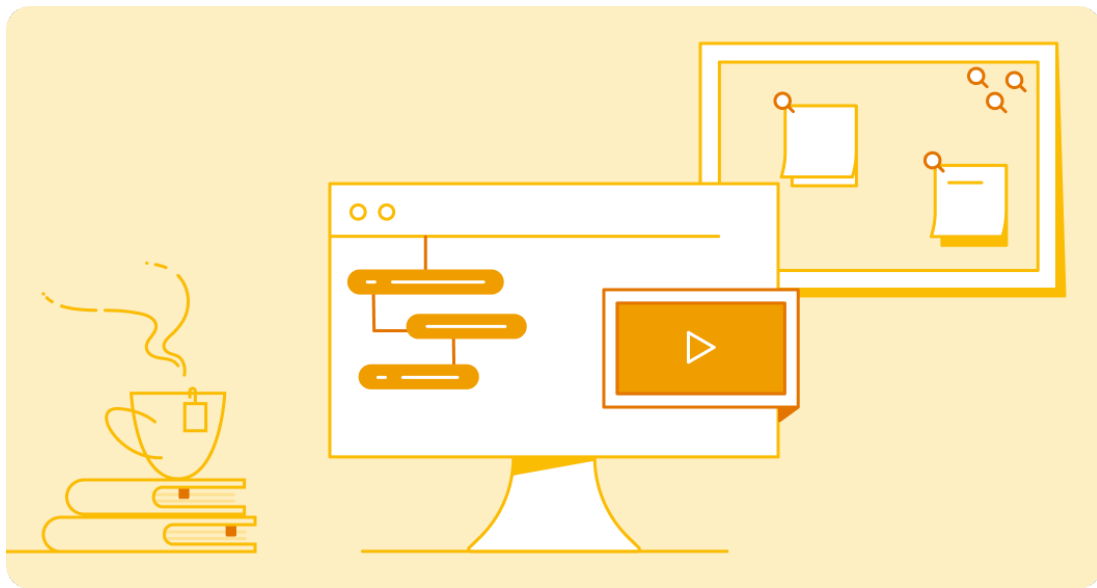
book Lab
access_time 30 minutes
show_chart Intermediate

Send an image to the Cloud Vision API and have it identify objects, faces, and landmarks.

Start lab

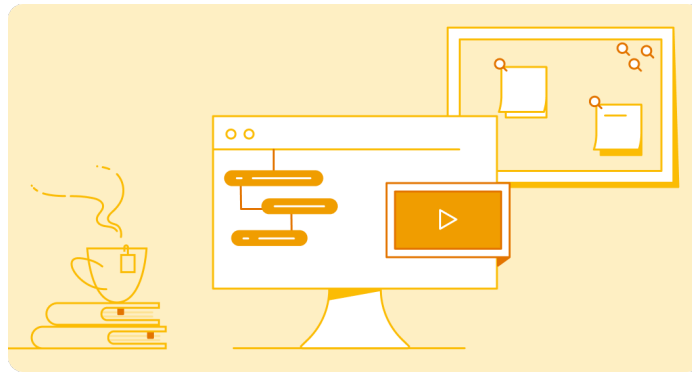# 16 [DEPRECATED] Awwvision: Cloud Vision API from a Kubernetes Cluster

book Lab
access_time 45 minutes
show_chart Intermediate

This hands-on lab uses Kubernetes and Cloud Vision API to create an example of how to use the Vision API to classify (label) images from Reddit's /r/aww subreddit and display the labelled results in a web app.

Start lab

(/focuses/1831?parent=catalog&path=32)

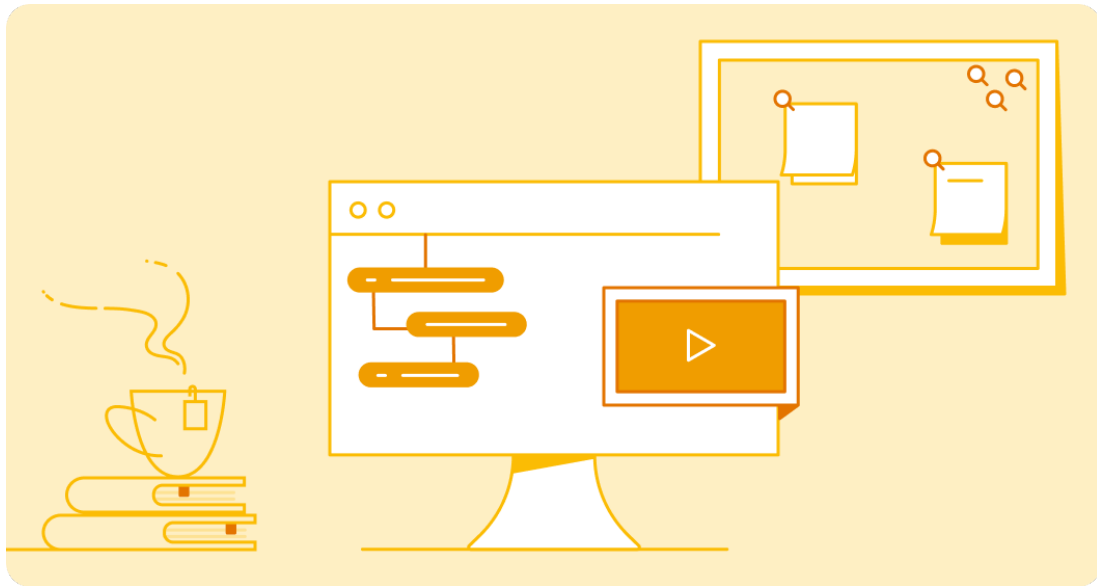# 17 Scanning User-Generated Content using the Cloud Video Intelligence and Cloud Vision APIs

book Lab
access_time 1 hour
show_chart Intermediate

This lab will show you how to deploy a set of Cloud Run functions in order to process images and videos with the Cloud Vision API and Cloud Video Intelligence API.

Start lab

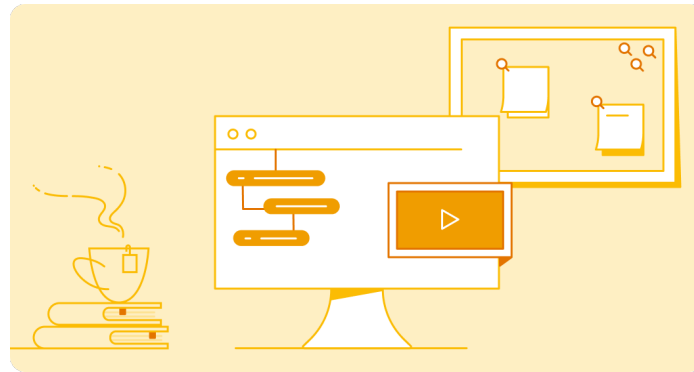# 18 [DEPRECATED] Building Virtual Agent Fulfillment

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab, you will continue working on your Pigeon Travel chat agent and add context as well as setup fulfillment to lookup and store reservations entries in Firestore.

Start lab

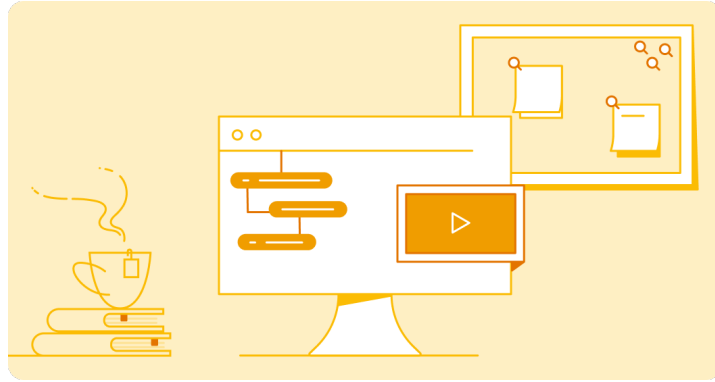# 19 Extract, Analyze, and Translate Text from Images with the Cloud ML APIs

book Lab
access_time 1 hour
show_chart Intermediate

Use the Cloud Vision, Natural Language, and Translation APIs to capture text strings from images, recognize characters, and analyze and translate the text strings into other languages.

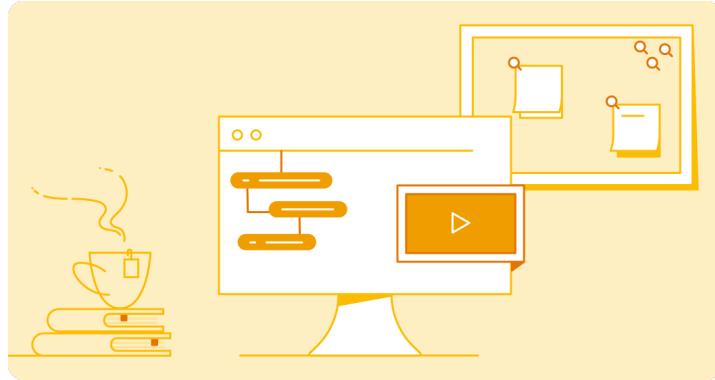Start lab

20 Vertex AI Tabular Data: Qwik Start

book Lab
access_time 45 minutes
show_chart Intermediate

In this lab, you will learn how to build a binary classification model from tabular data using Vertex AI.

Start lab

21 Deploy a BigQuery ML Customer Churn Classifier to Vertex AI for Online Predictions
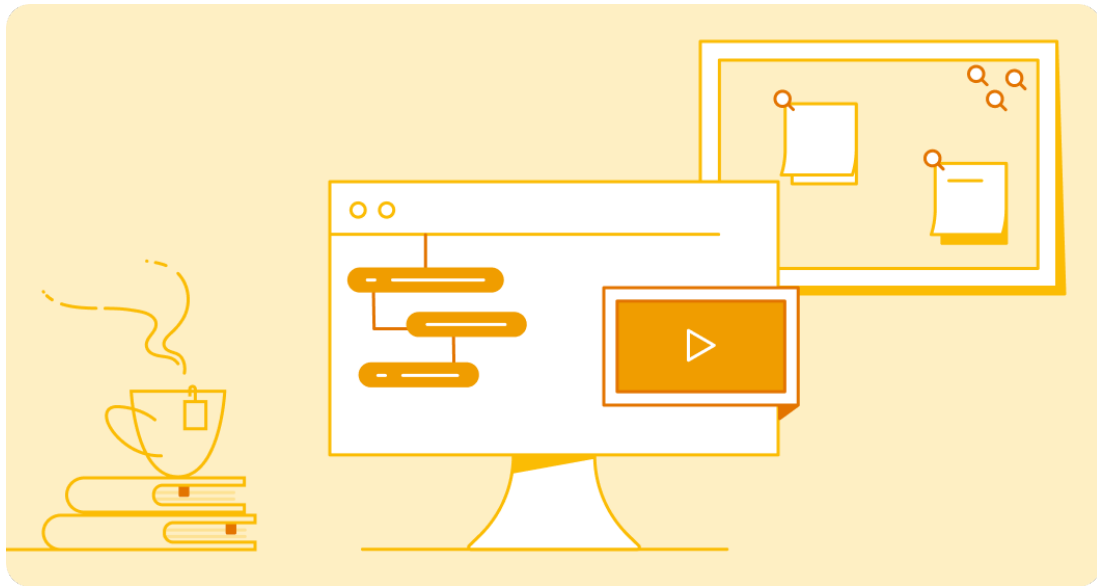
book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

In this lab, you will train, tune, evaluate, explain, and generate batch and online predictions with a BigQuery ML XGBoost model. You will use a Google Analytics 4 dataset from a real mobile application, Flood it!, to determine the likelihood...

Start lab

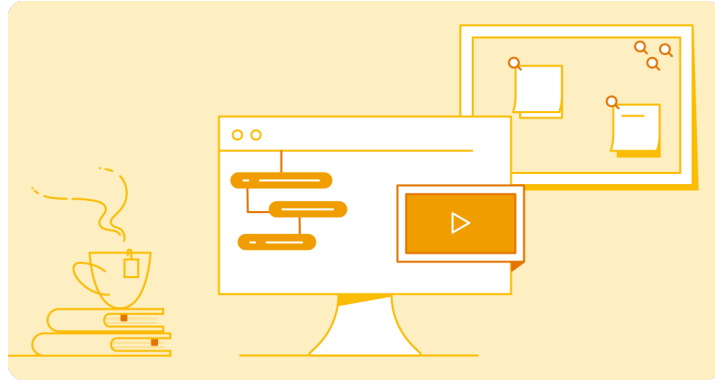# 22 [DEPRECATED] Vertex AI Workbench Notebook: Qwik Start

book Lab
access_time 1 hour
show_chart Introductory

In this lab you train and deploy a TensorFlow model to Vertex AI for serving (prediction). Watch these short videos Getting started with Notebooks for machine learning and Faster model training and experimentation with Vertex AI.

Start lab

(/focuses/21599?parent=catalog&path=32)

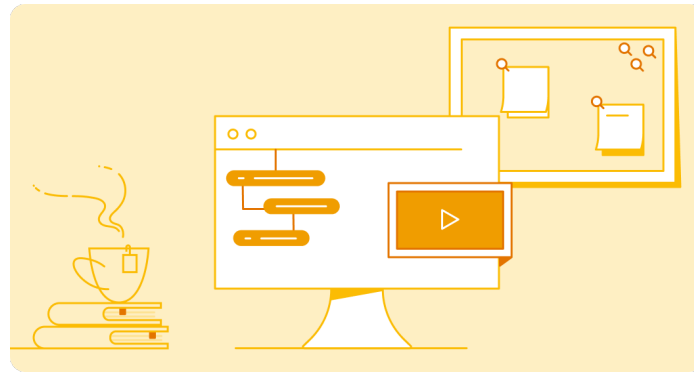# 23 Running Distributed TensorFlow using Vertex AI

book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

In this lab, you will use TensorFlow's distribution strategies and the Vertex AI platform to train and deploy a custom TensorFlow image classification model to classify an image classification dataset.
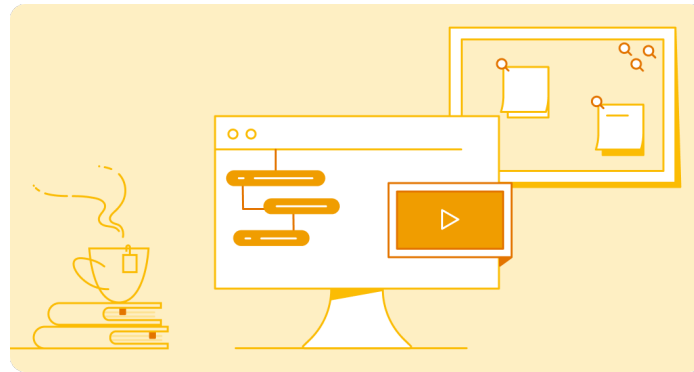
Start lab

(/focuses/1749?parent=catalog&path=32)

24 Classify Text into Categories with the Natural Language API

book Lab
access_time 1 hour
show_chart Intermediate

In this lab you'll learn how to classify text into categories using the Natural Language API

Start lab

# 25 Entity and Sentiment Analysis with the Natural Language API

book Lab
access_time 45 minutes
show_chart Intermediate

The Cloud Natural Language API lets you extract entities, and perform sentiment and syntactic analysis on a block of text. In this hands-on lab you'll learn how to extract entities and sentiment from text using the Cloud Natural Language API.

Start lab
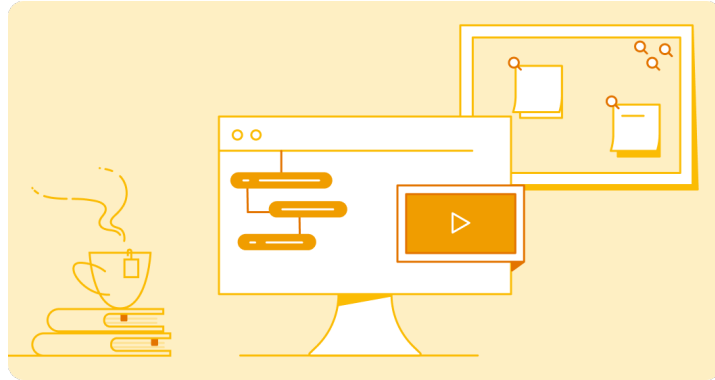
(/focuses/33331?parent=catalog&path=32)

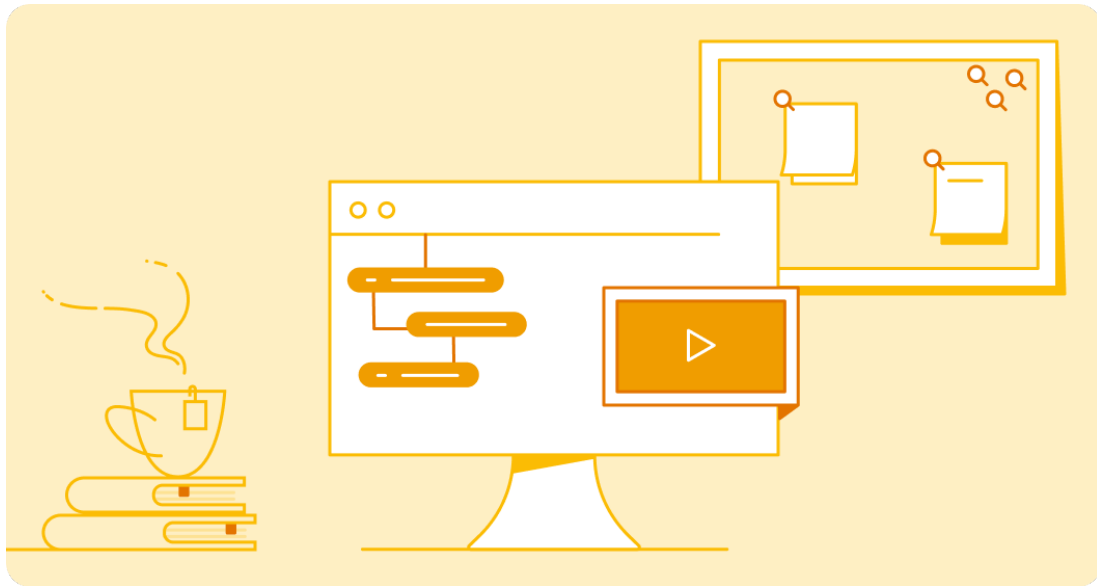# 26 Migrate Existing Prometheus Monitoring Workloads to Google Cloud

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

Learn how to use Managed Service for Prometheus in a self-deployed data collection mode. You can also utilize managed data collection as well.

Start lab

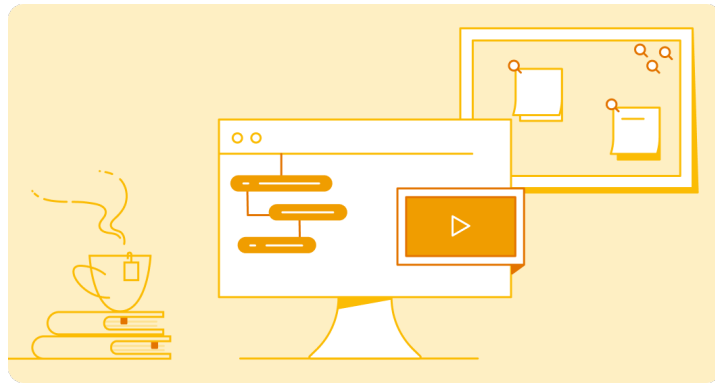# 27 [DEPRECATED] Apigee API Management Fundamentals

book Lab
access_time 2 hours
show_chart Introductory

This lab introduces you to the fundamentals of API Management with Google's Apigee API Management Platform. You will go through the API Lifecycle at a high level - from API design, API Security, API Consumption to API Analytics & Monitoring.

Start lab

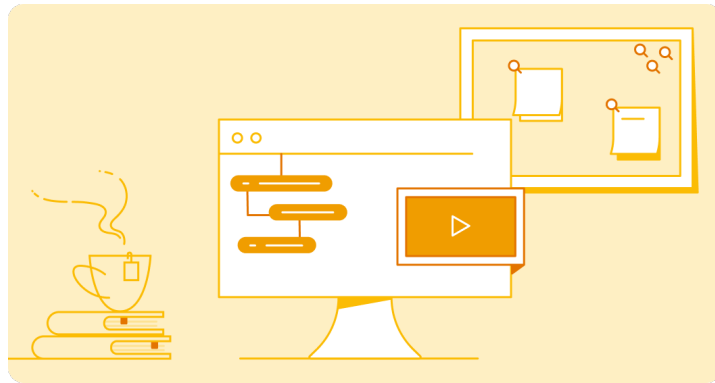# 28 Protecting APIs with Apigee X and Cloud Armor

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab, you use an Apigee X threat protection policy and Cloud Armor to protect your APIs.

Start lab

(/focuses/20117?parent=catalog&path=32)

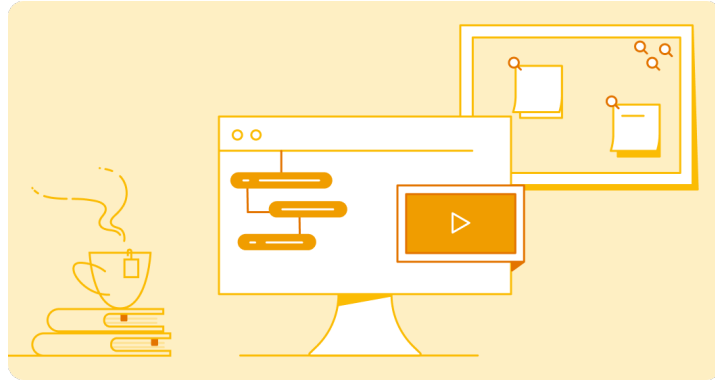# 29 Provisioning an Apigee X Evaluation Organization

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab, you use the Apigee X provisioning wizard to create an Apigee X evaluation organization (org).

Start lab

(/focuses/20226?parent=catalog&path=32)
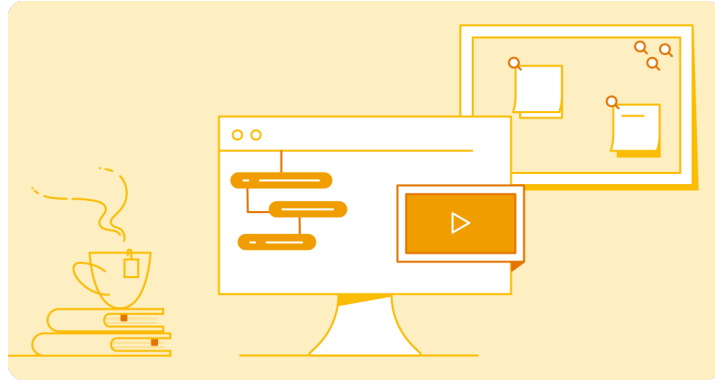
30 Adding an Apigee X Environment and Group

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab, you add a new environment and environment group to an Apigee X evaluation org.

Start lab

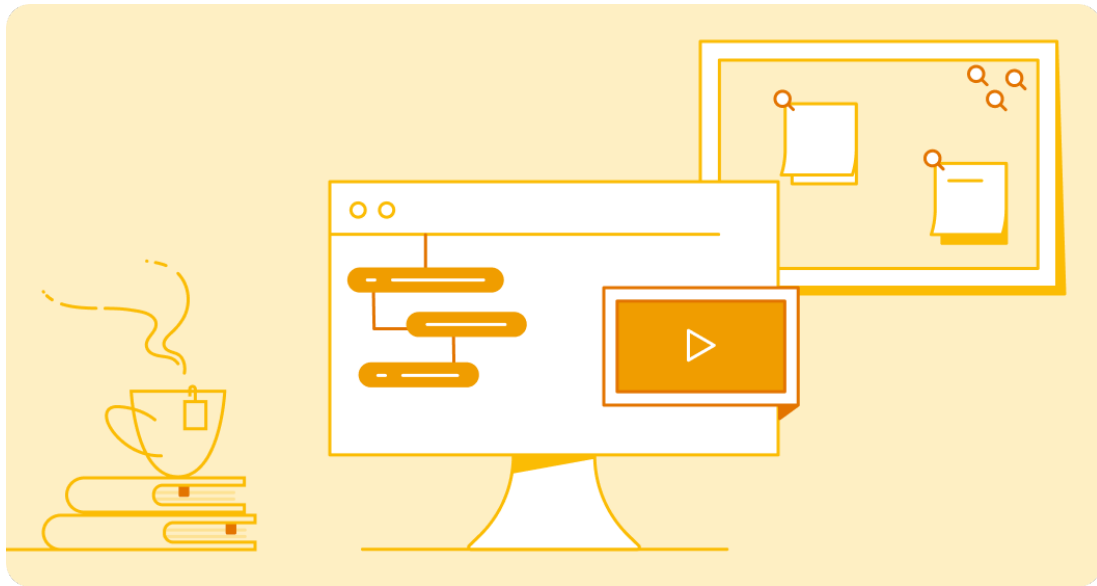# 31 Using NAT for Apigee X Backend Services

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab, you enable a NAT IP address for the runtime instance. This static IP address is used when calling from Apigee X to backend services.

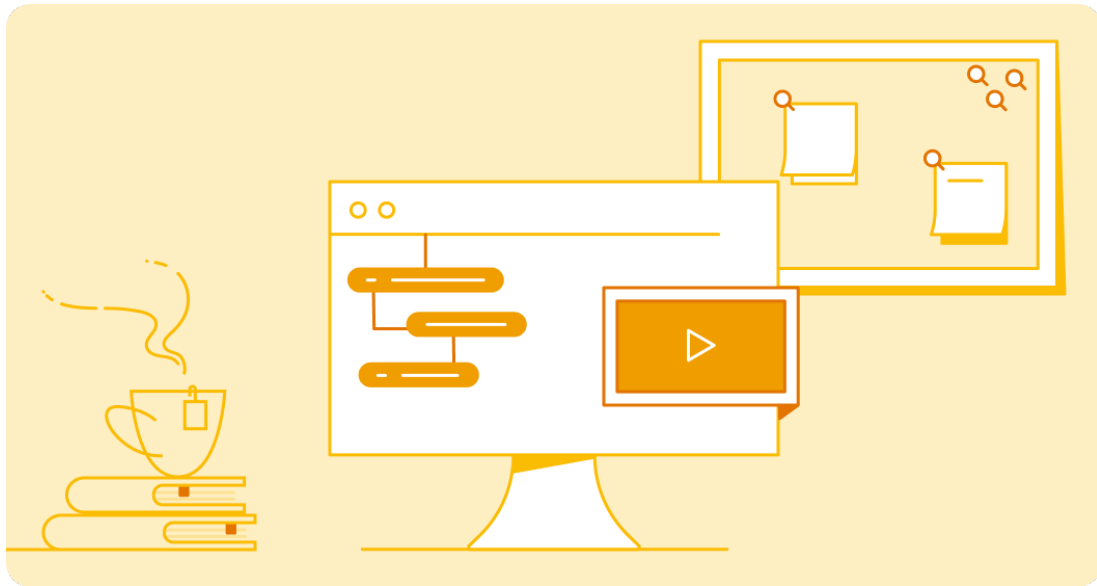Start lab

32 [DEPRECATED] Migrate for Compute Engine

book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

Use Migrate for Compute Engine to migrate an EC2 instance from AWS to Compute Engine on Google Cloud and verify the migration

Start lab

33 Migrating to Cloud SQL from Amazon RDS for MySQL Using Database Migration Service
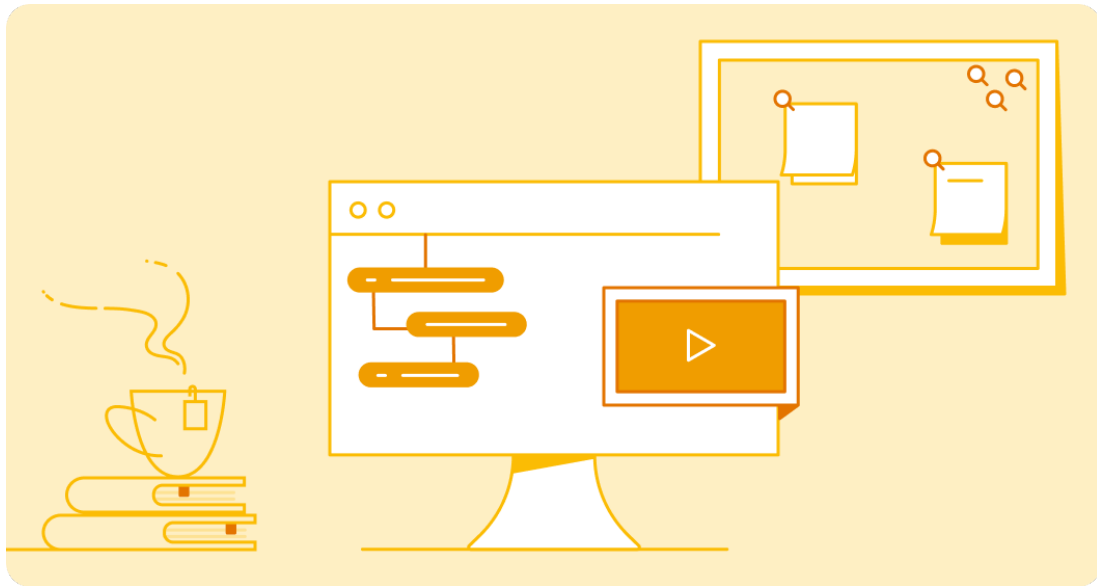
book Lab

access_time 1 hour 30 minutes

show_chart Advanced

In this lab, you migrate MySQL data from an Amazon RDS instance for MySQL to Cloud SQL for MySQL using a one-time Database Migration Service job and an IP allowlist for connectivity. After you create and run the migration job,...

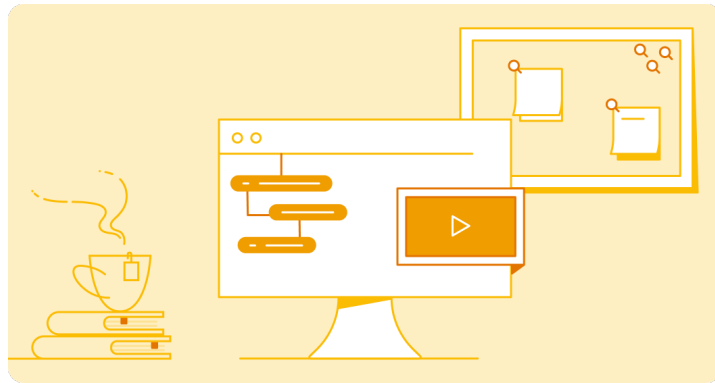Start lab

34 A Tour of Google Cloud Sustainability

book Lab
access_time 1 hour
show_chart Introductory

In this hands-on lab, you will learn why Google Cloud is the cleanest cloud in the industry by exploring and utilizing sustainability tools..

Start lab

(/focuses/21028?parent=catalog&path=32)
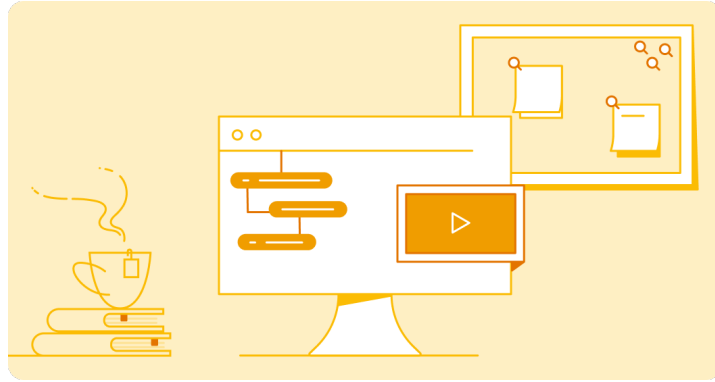
35 Create and Test a Document AI Processor

book Lab
access_time 1 hour
show_chart Introductory

Learn how to to create and use document processors using the Document AI API.

Start lab

36 Identify Damaged Car Parts with Vertex AutoML Vision
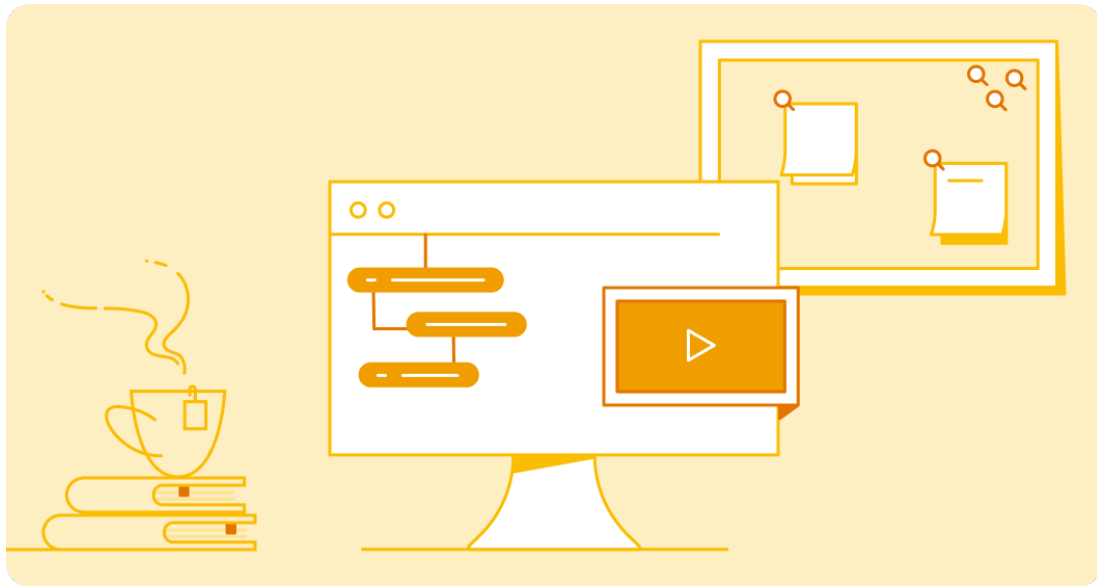
book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

In this lab, you will learn how to train a custom Vertex AI image classification model to recognize damaged car parts.

Start lab

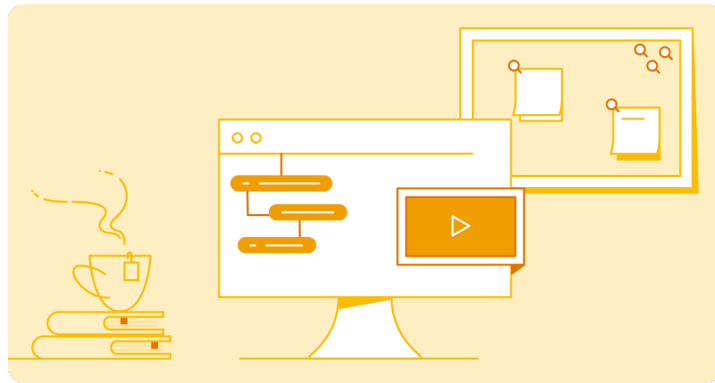# 37 [DEPRECATED] Design Conversational Flows for your Agent

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

Contact Center AI can increase customer satisfaction and operational efficiency by improving call deflection rates, and achieve shorter handling, while making overall operations faster and more effective. In this lab, you'll learn how to use Dialogflow to create a conversational...

Start lab

(/focuses/21571?parent=catalog&path=32)

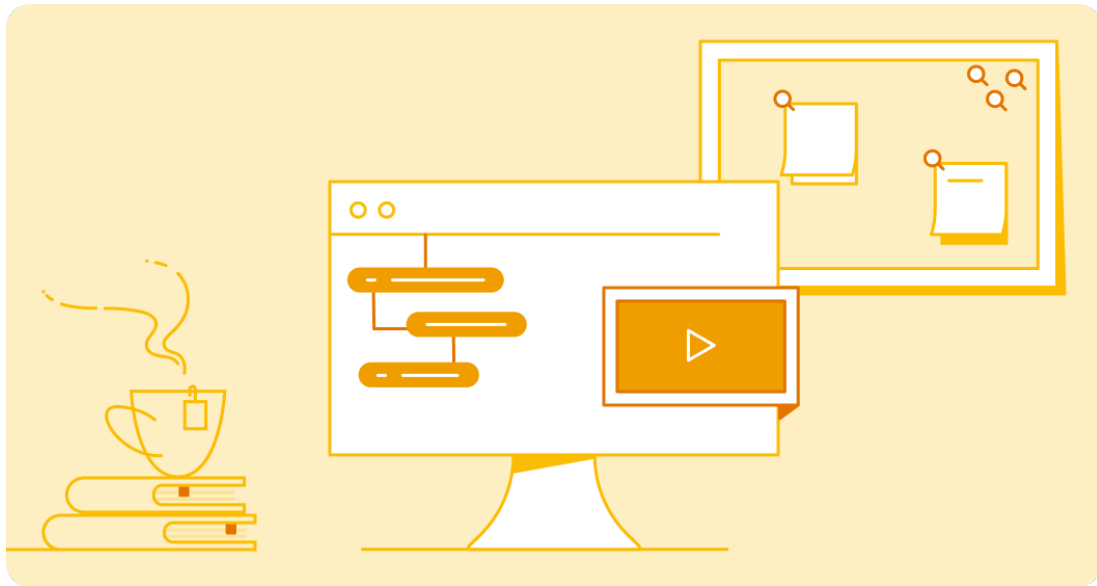# 38 Rate Limiting with Cloud Armor

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

Configure an HTTP Load Balancer with global backends, stress test the Load Balancer, and add a Cloud Armor rate limiting policy to restrict based on IP.

Start lab

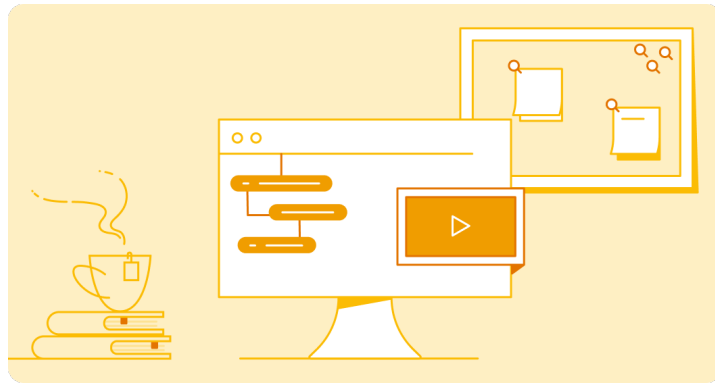# 39 Securing Virtual Machines using BeyondCorp Enterprise (BCE)

book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

In this lab, you will learn how you can use Identity-Aware Proxy (IAP) TCP forwarding to enable administrative access to VM instances that do not have external IP addresses or do not permit direct access over the internet.
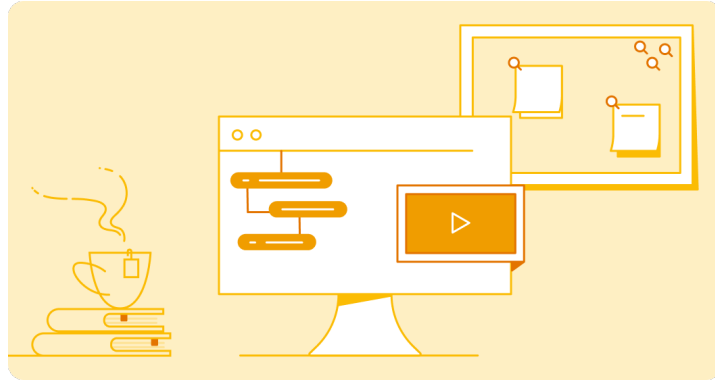
Start lab

40 Redacting Sensitive Data with the DLP API

book Lab
access_time 1 hour
show_chart Introductory

Redacting Sensitive Data with the DLP API

Start lab

(/focuses/46234?parent=catalog&path=32)

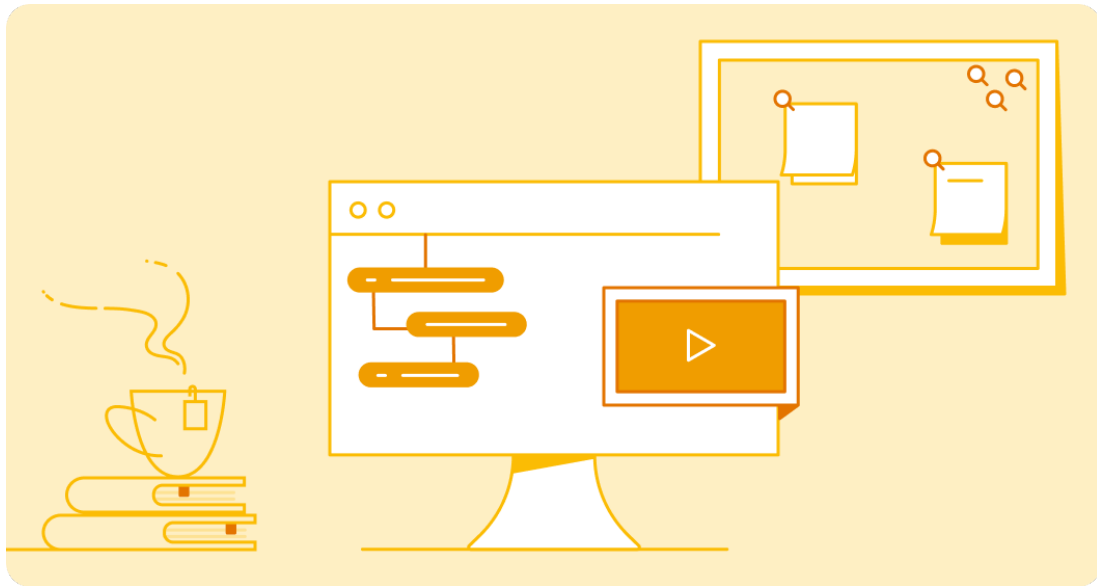# 41 Redacting Critical Data with Sensitive Data Protection

book Lab
access_time 45 minutes
show_chart Introductory

In this lab, you inspect strings and files for sensitive data and then practice using the Cloud Data Loss Prevention (DLP) API to protect data.

Start lab

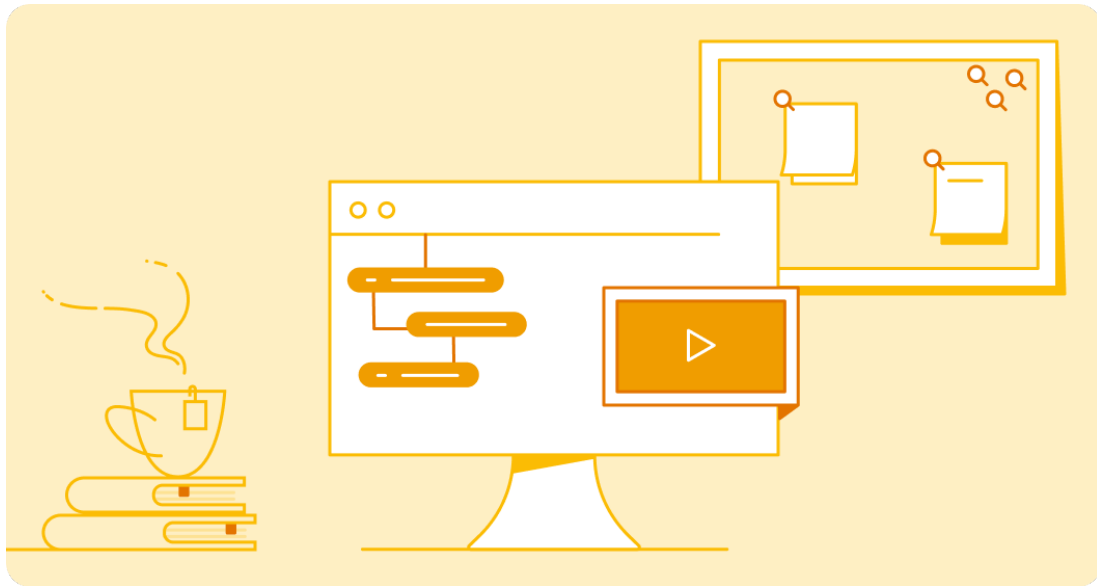# 42 [DEPRECATED] Securing Multi-Cloud Applications using BeyondCorp Enterprise (BCE)

book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

In this lab, you will learn how to secure multi-cloud applications using Identity-Aware Proxy (IAP) connector.

Start lab

43 [DEPRECATED] Build a Google Workspace Add-on with Node.js and Cloud Run
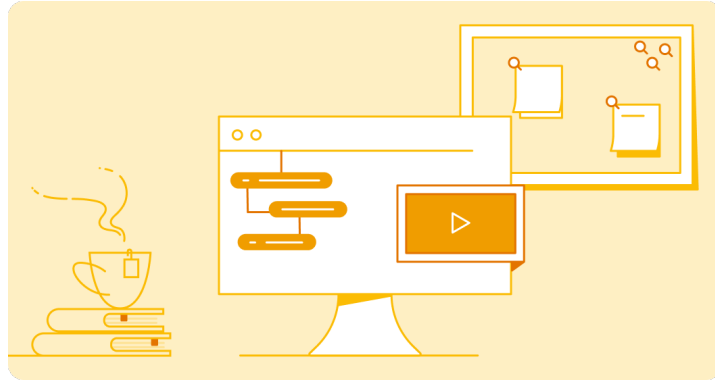
book Lab

access_time 1 hour 30 minutes

show_chart Advanced

In this lab you'll learn how to build a Google Workspace Add-on using Node.js and Cloud Run.
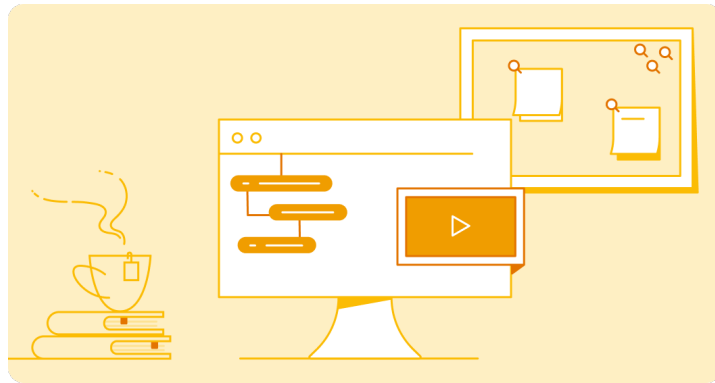
Start lab

44 Google AppSheet: Getting Started

book Lab
access_time 1 hour
show_chart Introductory

Learn how to use Google AppSheet to enable everyone in your organization to build and extend applications without coding.

Start lab

(/focuses/32750?parent=catalog&path=32)
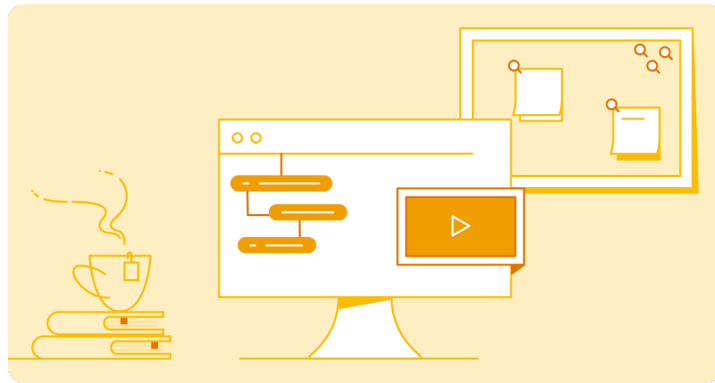
45 Publish your AppSheet App

book Lab
access_time 45 minutes
show_chart Introductory

In this lab, you use AppSheet to publish your app.

Start lab

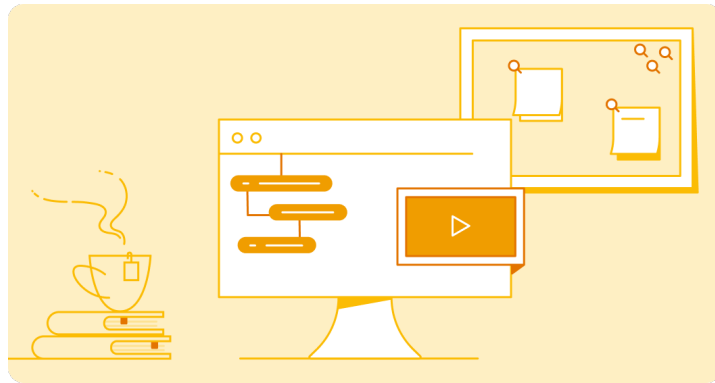# 46 Implement the User Experience for your AppSheet App

book Lab
access_time 1 hour
show_chart Introductory

In this lab, you will use AppSheet to implement the UX components in your app.

Start lab

(/focuses/20159?parent=catalog&path=32)

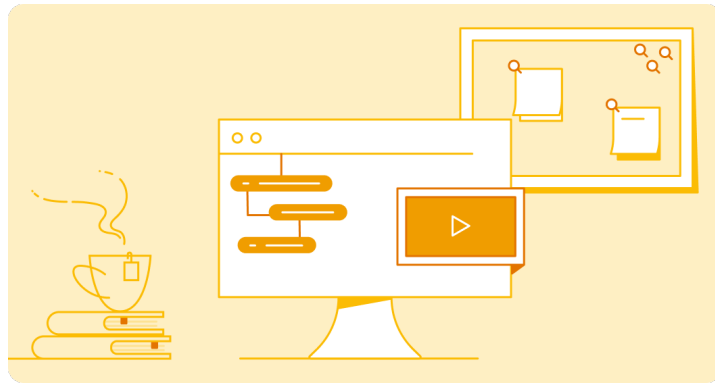# 47 Connect and Configure Data for your AppSheet App

book Lab
access_time 1 hour
show_chart Introductory

In this lab, you use AppSheet to connect and configure data for your app.

Start lab

(/focuses/57387?parent=catalog&path=32)

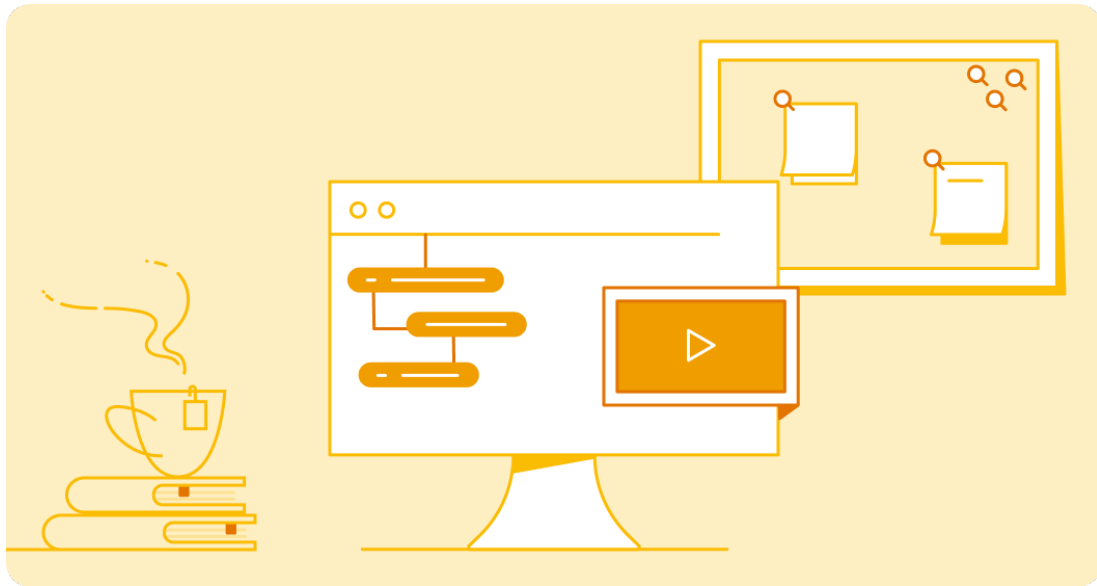# 48 Connect an App to a Cloud SQL for PostgreSQL Instance

book Lab
access_time 1 hour
show_chart Introductory

In this lab, you create a Kubernetes cluster and deploy a simple application to that cluster. Then, you connect the application to the supplied Cloud SQL for PostgreSQL database instance and confirm that it is able to write to and...

Start lab

49 Leverage the Autoscaler Tool for Cloud Spanner to Achieve Workload Elasticity
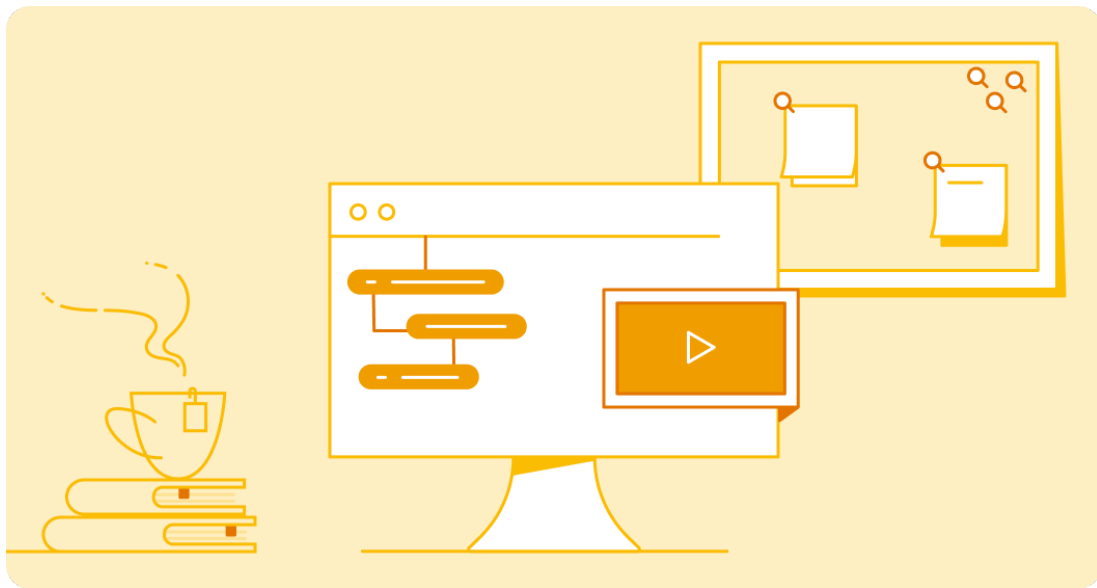
book Lab
access_time 1 hour
show_chart Introductory

In this lab you'll deploy the Autoscaler tool for Cloud Spanner, a companion tool to Cloud Spanner, in the per-project configuration where the autoscaler tools are located in the same project as the Cloud Spanner instance being autoscaled.

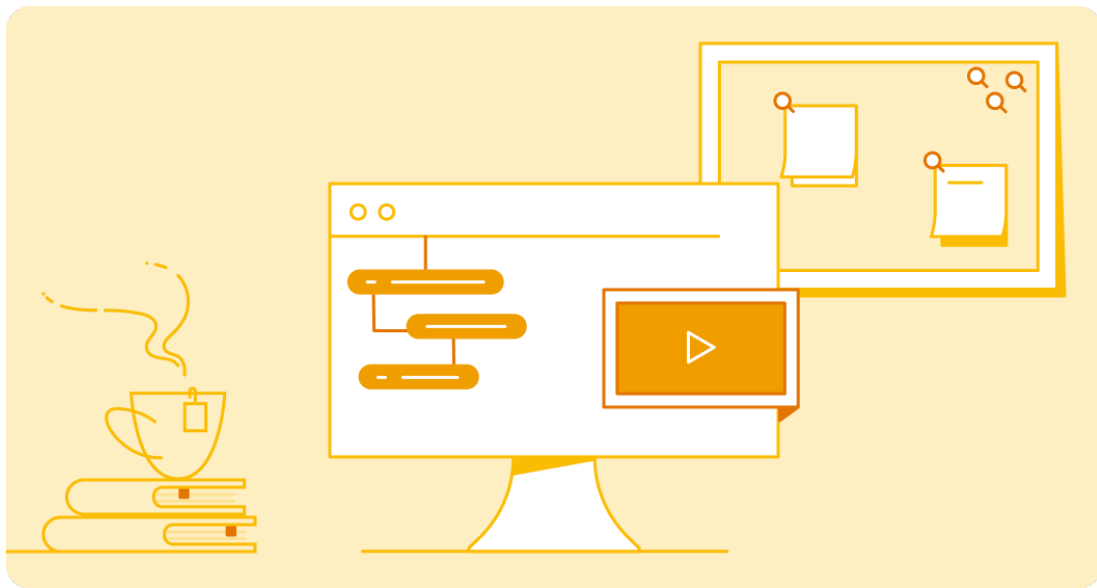Start lab

50 Designing and Querying Bigtable Schemas

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

In this lab, you explore a Bigtable instance and use the Bigtable CLI (cbt CLI) to query data in Bigtable. You also design a table schema and row key using best practices for Bigtable.
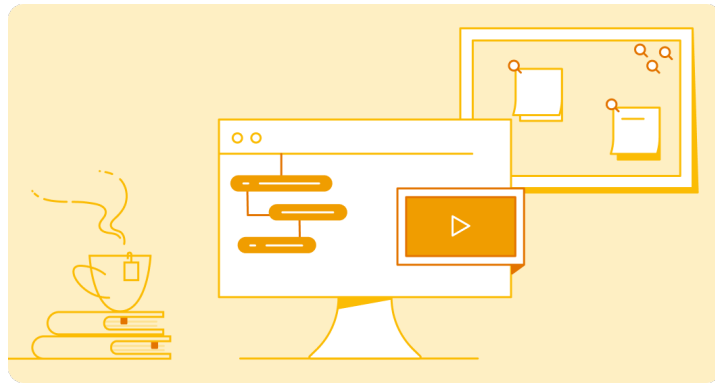
Start lab

51 [DEPRECATED] Firebase Web

book Lab

access_time 1 hour 30 minutes

show_chart Advanced

In this lab you'll learn how to use the Firebase platform to easily create Web applications and implement and deploy a chat client.

Start lab

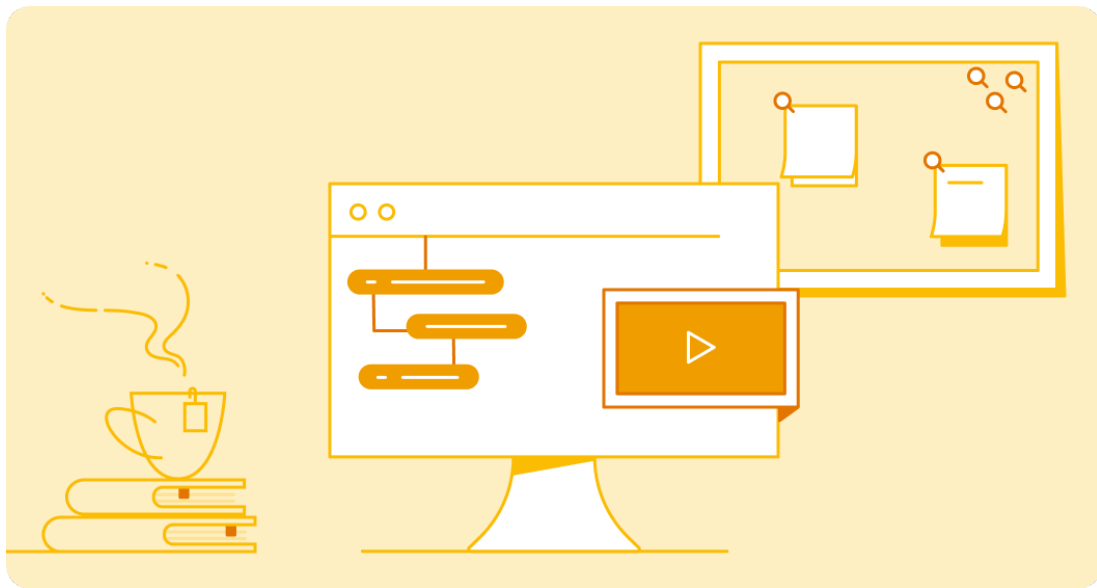# 52 Using Memorystore for Redis Read Replicas to Improve Read Performance

book Lab
access_time 1 hour
show_chart Introductory

In this lab, you will configure a highly available Memorystore cluster and review the architecture of such a deployment.

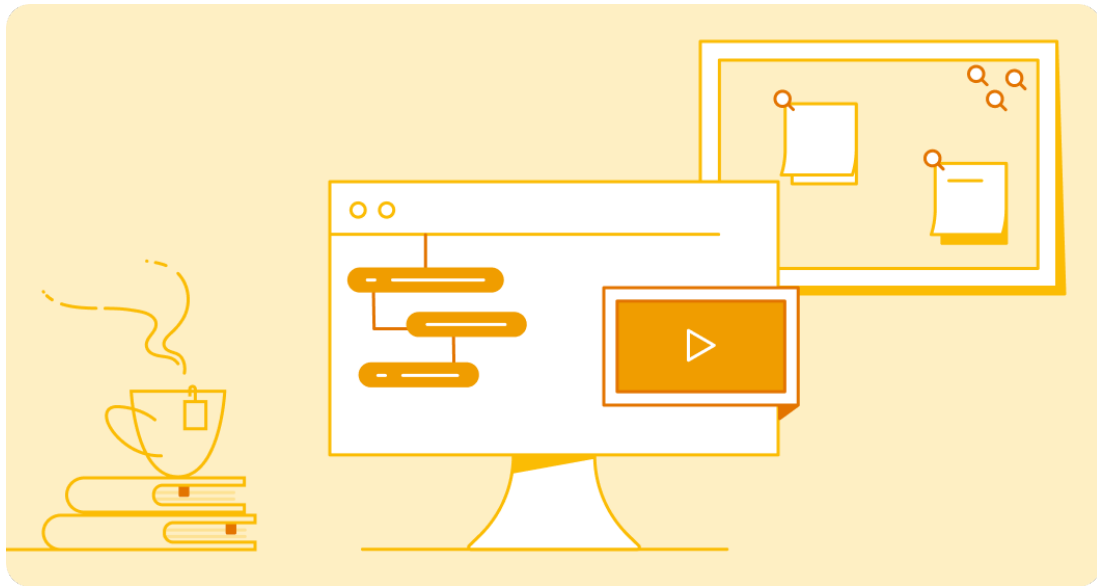Start lab

53 [DEPRECATED] Datastream MySQL to BigQuery

book Lab

access_time 1 hour 30 minutes

show_chart Introductory

Learn to migrate MySQL Databases to BigQuery using Datastream and Dataflow

Start lab

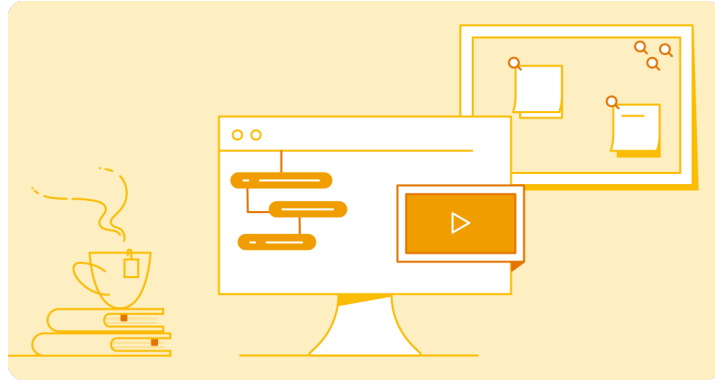# 54 [DEPRECATED] Analyzing a Tennis Serve with the Video Intelligence API

book Lab
access_time 1 hour
show_chart Introductory

Learn how to analyze key parts of a tennis serve using the Video Intelligence API. To preview, watch the short video this lab is based off of.

Start lab

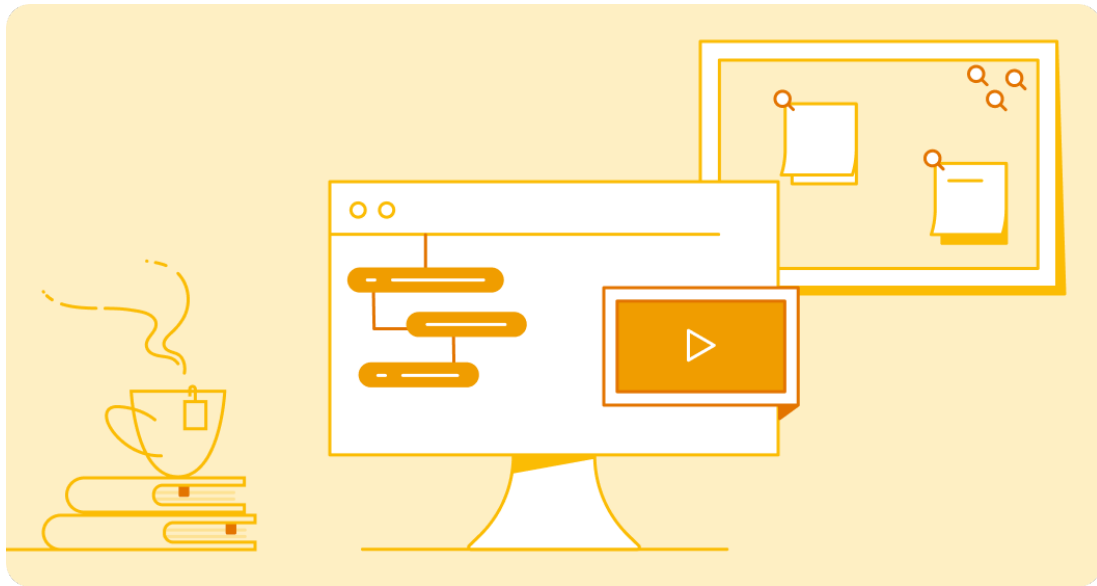# 55 Creating a De-identified Copy of Data in Cloud Storage

book Lab
access_time 45 minutes
show_chart Introductory

In this lab, you create and run a Sensitive Data Protection job using the De-identify (DeID) Findings Action to create a redacted and de-identified copy data in Cloud Storage.

Start lab

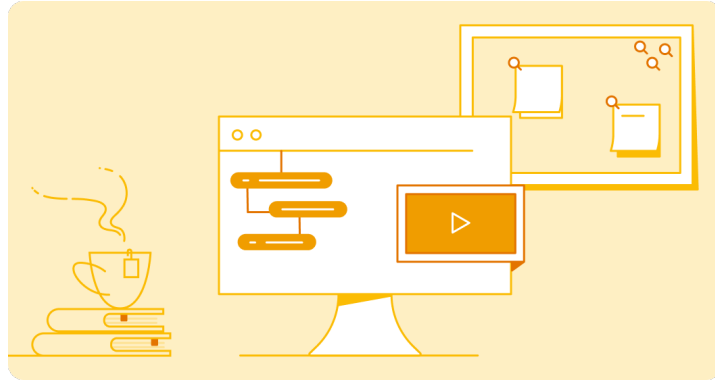# 56 [DEPRECATED] Getting Started with Gaming on Cloud Spanner

book Lab

access_time 1 hour 30 minutes

show_chart Intermediate

In this lab, you will implement a player profile service and a game matchmaking service to work with Cloud Spanner.

Start lab

57 Using BigQuery Omni with AWS

book Lab
access_time 1 hour
show_chart Advanced

In this lab, you will run BigQuery analytics on data stored in AWS S3 using BigQuery Omni.

Start lab