Optimizing Google Cloud Build Costs with e2-highcpu-32 Machine Type

Introduction

In our ongoing efforts to minimize GCP resource expenditure, we have identified a more economical machine type for the GCP Cloud Build tool. Initially, our build processes used by dev team relied on the higher-cost n1-highcpu-32 machine type for building Docker images. However, recognizing the need for a cost-effective alternative, we have explored the utilization of the e2-highcpu-32 machine type.

Background

Previous Configuration

Our build process involved using the n1-highcpu-32 machine type for Cloud Build. While this machine type provides substantial computational power, it comes with a higher cost.

Exploration of e2-highcpu-32

To explore cost-effective alternatives, we decided to test the e2-highcpu-32 machine type for our build process. The e2 series is known for being more budget-friendly while still offering sufficient resources for various workloads.

Test Implementation

To implement the test, we used the following command to submit the build:

```
gcloud builds submit --tag gcr.io/world-learning-400909/aretec-search --timeout=9000 --machine-type=e2-highcpu-32
```

This command specifies the e2-highcpu-32 machine type for the build process. The --timeout flag sets the maximum build time, and the --tag flag defines the target container image repository.

Results

The test using the e2-highcpu-32 machine type for the build process produced successful results. The build executed without any issues, demonstrating that this machine type is suitable for our requirements.

Cost Comparison

n1-highcpu-32

- **Advantages:**
  - High computational power
- **Disadvantages:**
  - Higher cost

e2-highcpu-32

- **Advantages:**
  - Sufficient computational power
  - Lower cost
- **Disadvantages:**
  - May have slightly less consistent performance compared to n1 series

Recommendation

Based on the successful test and the cost savings achieved with the e2-highcpu-32 machine type, we recommend adopting this machine type for our Cloud Build processes. This will contribute to cost optimization without compromising the efficiency of our build operations.

Conclusion

By leveraging the e2-highcpu-32 machine type in our Cloud Build processes, we can achieve a cost-effective solution while meeting our build requirements. This optimization aligns with our commitment to efficiently manage resources and control expenses within our GCP environment.