

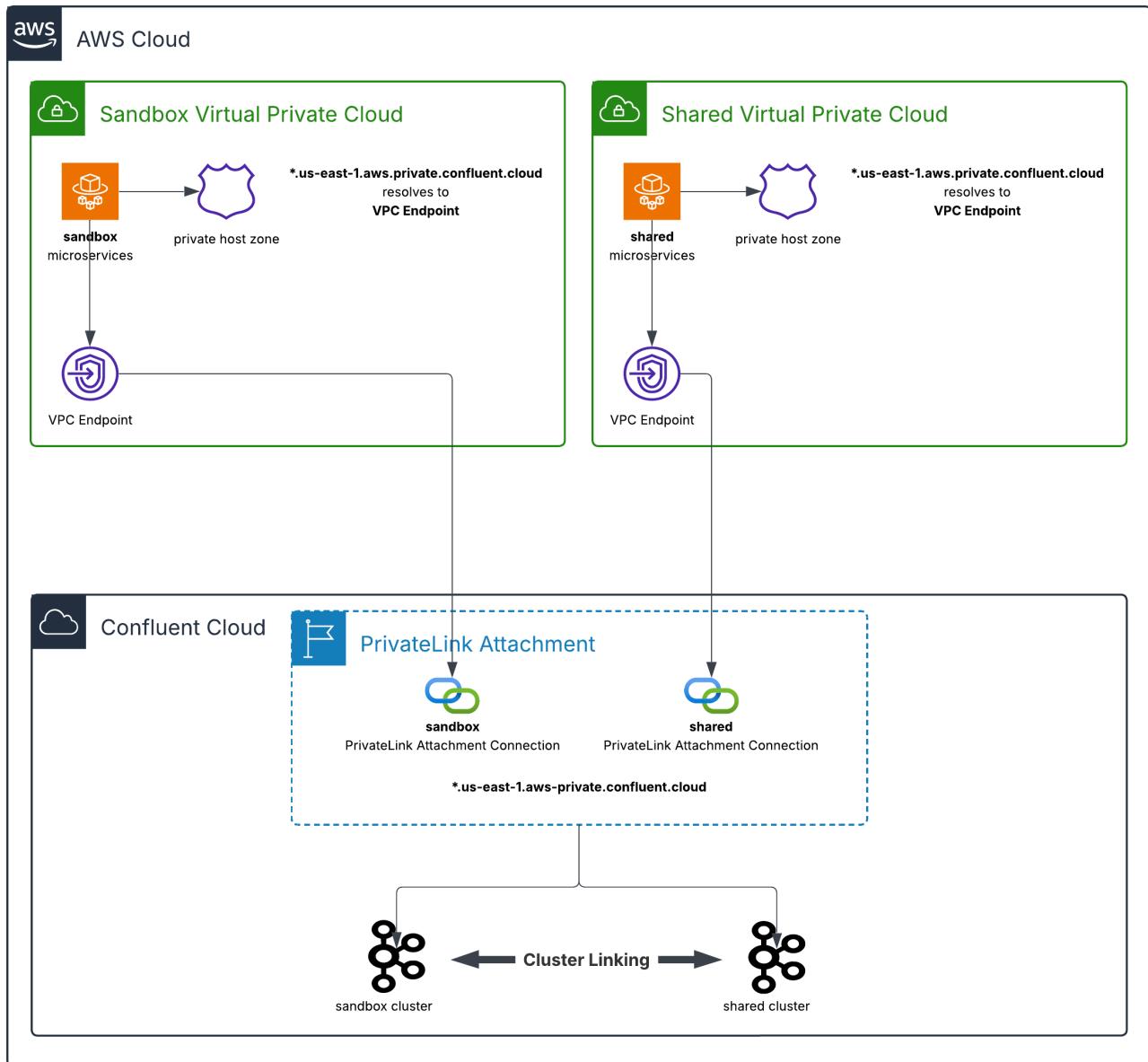
IaC Confluent Cloud AWS Private Linking with Cluster Linking Example

This repository provides **production-grade Terraform infrastructure-as-code** that implements a **secure, multi-network Confluent Cloud architecture**. It demonstrates **AWS PrivateLink connectivity from a single Confluent Cloud environment to multiple AWS VPCs**, enabling private, network-isolated access without exposing traffic to the public internet.

The solution also showcases **in-region Cluster Linking between two Confluent Cloud Kafka clusters**, enabling **low-latency, fully managed data replication** across teams, lines of business, or isolated environments (for example, development, staging, and production) within the same AWS region.

Cluster Linking maintains an **in-sync mirror of selected topics** on the consuming cluster. This isolation allows consuming teams to independently scale **large numbers of consumers, stream processing applications, and downstream sinks** without impacting the producing cluster. From the producer's perspective, the load is equivalent to **a single additional consumer**, regardless of downstream scale.

Access control and ownership remain cleanly separated: the producing team grants **scoped read credentials** to approved topics, while the consuming team **creates, owns, monitors, and manages the cluster link**. This pattern enables secure, scalable data sharing with clear operational boundaries and minimal coupling.



Below is the Terraform resource visualization of the infrastructure that's created:

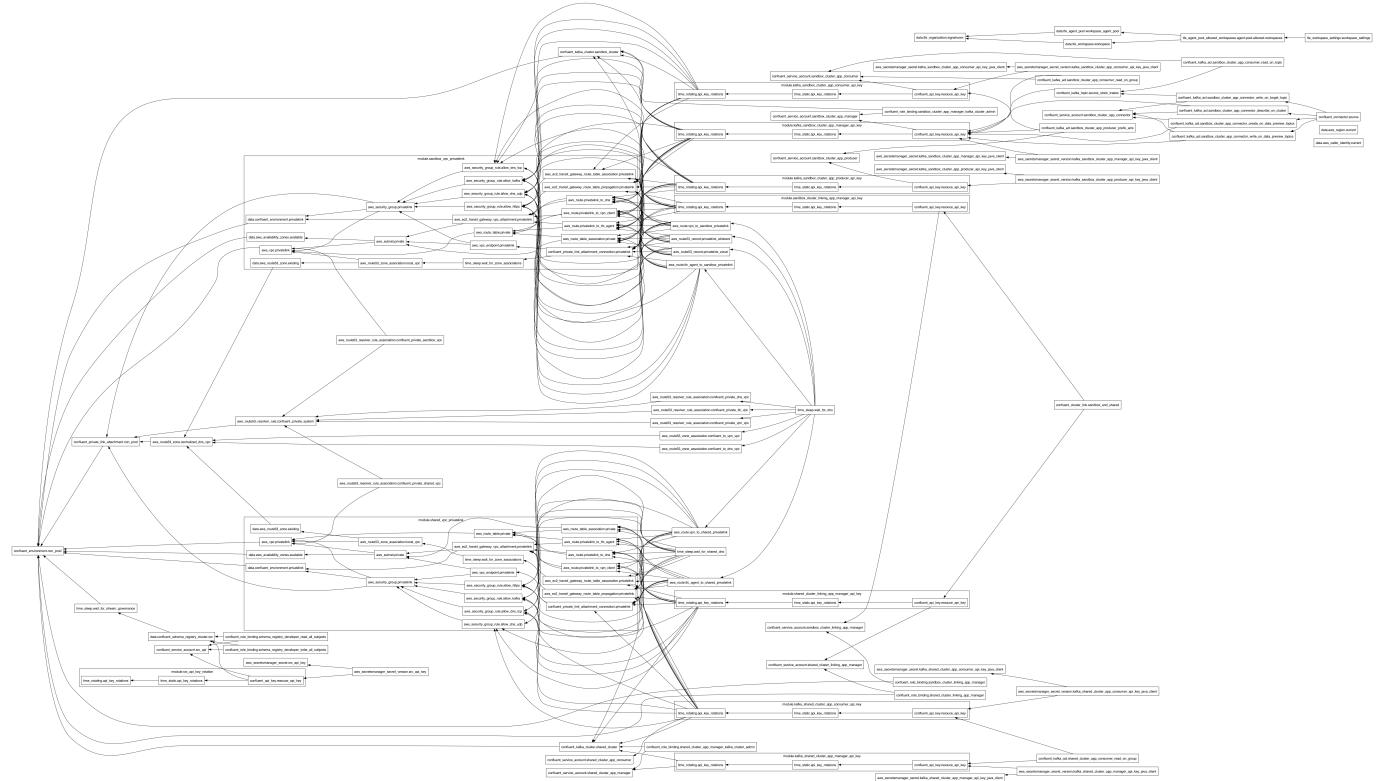


Table of Contents

- **1.0 Resources**
 - **1.1 Terminology**
 - **1.2 Related Documentation**

1.0 Resources

1.1 Terminology

- **PHZ:** Private Hosted Zone - AWS Route 53 Private Hosted Zone is a DNS service that allows you to create and manage private DNS zones within your VPCs.
 - **TFC:** Terraform Cloud - A service that provides infrastructure automation using Terraform.
 - **VPC:** Virtual Private Cloud - A virtual network dedicated to your AWS account.
 - **AWS:** Amazon Web Services - A comprehensive cloud computing platform provided by Amazon.
 - **CC:** Confluent Cloud - A fully managed event streaming platform based on Apache Kafka.
 - **PL:** PrivateLink - An AWS service that enables private connectivity between VPCs and services.
 - **IaC:** Infrastructure as Code - The practice of managing and provisioning computing infrastructure through machine-readable definition files.

1.2 Related Documentation

- AWS PrivateLink Overview in Confluent Cloud
 - Use AWS PrivateLink for Serverless Products on Confluent Cloud
 - GitHub Sample Project for Confluent Terraform Provider PrivateLink Attachment
 - Geo-replication with Cluster Linking on Confluent Cloud
 - Use the Confluent Cloud Console with Private Networking
 - IP Filtering on Confluent Cloud
 - AWS/Azure PrivateLink Networking Course

- Hands On: Configuring a PrivateLink Cluster