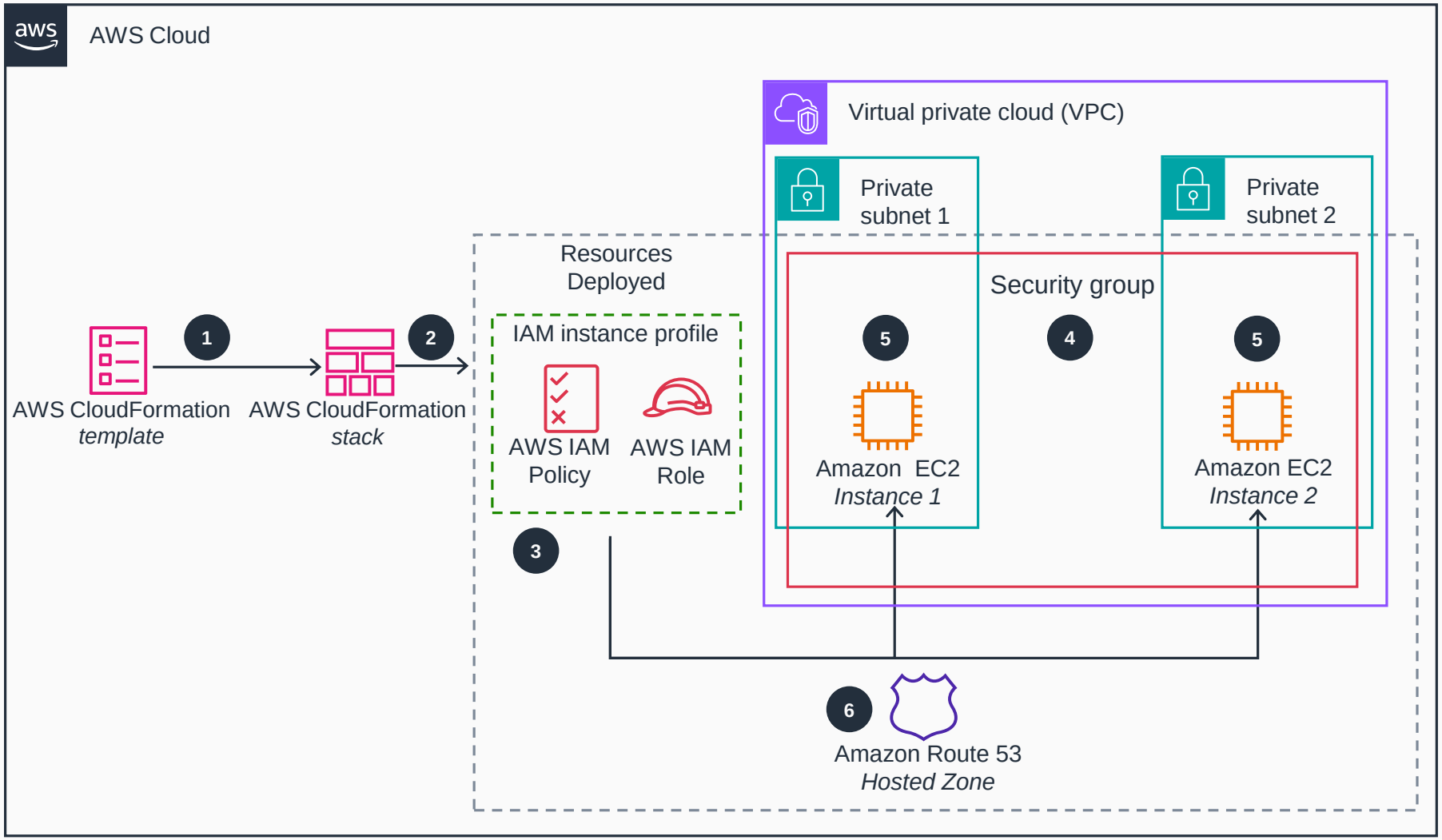
Guidance for Programmatic Deployment of NDI Discovery Servers for Broadcast Workflows on AWS

This architecture diagram shows the programmatic deployment of two Network Device Interface (NDI) Discovery Servers using AWS CloudFormation templates.



1. The **AWS CloudFormation** template defines the AWS resources and their configurations. In this first step, the template is used to deploy a **CloudFormation** Stack.
2. **CloudFormation** provisions or updates the resources specified in the template.
3. **CloudFormation** creates an **AWS Identity and Access Management (IAM**) instance profile. An instance profile is a container that passes an **IAM** role to an **Amazon Elastic Compute Cloud (Amazon EC2)** instance. It defines the permissions that the **Amazon EC2** instance will have when interacting with other AWS services. The instance profile includes an **IAM** role and an **IAM** policy that specify the allowed actions and resources.
4. **CloudFormation** creates a security group, which acts as a virtual firewall that controls inbound and outbound traffic to **Amazon EC2** instances.
5. **CloudFormation** creates two **Amazon EC2** instances, one in the private subnet 1 within Availability Zone 1, and another in the private subnet 2 within Availability Zone 2. These **Amazon EC2** instances use the instance profile from Step 3 and the security group from Step 4. They host the *NDI Discovery Server* application installed during the launch process.
6. **CloudFormation** creates an **Amazon Route 53** Private Hosted Zone with the Address records for the two **Amazon EC2** instances, which manage DNS and route traffic.

Reviewed for technical accuracy April 15, 2024

AWS Reference Architecture