Terraform - Cloud Q on AWS

Provisioning Instance Functions

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Overview

The Provisioning instance is an m5.large EC2 instance with custom user data. It configures the Qumulo Cluster and additional AWS environment requirements. Terraform still doesn't support in-place user data updates, so this instance is destroyed and rebuilt with subsequent Terraform applies. All necessary state information is stored in AWS Parameter Store. The lists below highlight the major tasks of the provisioning instance.

Qumulo Configuration

- Software upgrades of created nodes (EC2 Instances)
- Forms the first quorum for the cluster
- Adds nodes to quorum when growing the cluster
- Assigns Floating IP addresses to the cluster
- Configures Sidecar username, password, and custom RBAC role
- Configures Audit Logging for CloudWatch Logs
- Changes the admin password

AWS Configuration

- Checks for S3 reachability
- Checks for public internet reachability with a CURL test to trends.qumulo.com
- Edits the KMS CMK Policy so Sidecar can create CMK encrypted volumes
- Configures EBS gp3 volume throughput and IOPS
- Tags EBS volumes with the deployment_unique_name and volume type
- Tracks software versions, cluster IPs, instance IDs, & UUID in AWS Parameter Store
- Tracks the provisioning instance 'last-run-status' in Parameter Store

This instance automatically shuts down upon completion of its provisioning tasks.