**Some answers we are looking for:**

1. **What did you choose to automate the provisioning and bootstrapping of the instance? Why?**

**Answer:** Packer is one of the open-source tools for creating machine images from source configuration. Terraform for a compute instance can easily use Packer image to provision our instance without the manual setup. Packer and Terraform are both compatible as both are Hashicorp products.

1. **How did you choose to secure Elasticsearch? Why?**

**Answer:** Security is one of the critical components. For any setup, we should think about Security. Elasticsearch also provides reasonable security in free distribution as well. The main components for Elasticsearch security are TLS encryption, Authentication, and Authorization.

1. **How would you monitor this instance? What metrics would you monitor?**

**Answer:** For Elasticsearch monitoring, we use ‘metricbeat,’ an extremely lightweight shipper. We can easily monitor CPU, Disk, and Memory usage, Inbound or Outbound traffic.

**4. Could you extend your solution to launch a secure cluster of Elasticsearch nodes? What**

**would need to change to support this use case?**

**Answer:** Two important case we can consider for cluster nodes security :- a) Encrypting Communications between nodes in Elasticsearch (Need to do xpack.security.transport.ssl.enabled: true ) b) Encrypting HTTP client Communications (Need to do: xpack.security.http.ssl.enabled: true)

Also, we should have a proper node certificate.

Reference link:

[https://www.elastic.co/guide/en/Elasticsearch/reference/7.1/configuring-tls.html#tls-http](https://www.elastic.co/guide/en/elasticsearch/reference/7.1/configuring-tls.html#tls-http)

**5. Could you extend your solution to replace a running Elasticsearch instance with little or no**

**downtime? How?**

**Answer:** With no downtime, We can go with different deployment strategies like Rolling upgrade (In this, we require Elasticsearch snapshots), Blue-Green, or Canary deployment.

Reference Link: [https://www.elastic.co/blog/how-to-perform-a-zero-downtime-upgrade-of-Elasticsearch-in-production](https://www.elastic.co/blog/how-to-perform-a-zero-downtime-upgrade-of-elasticsearch-in-production)

**6. Was it a priority to make your code well structured, extensible, and reusable?**

**Answer:** Yes, For a Better end, product code should be structured, extensible, and reusable. Because if it’s not easy to change, it won’t stay correct for long.

**7. What sacrifices did you make due to time?**

**Answer:** Due to my hectic schedule, I sacrificed my weekends and stretched my laptop working hours. 😊