1. **Get Cluster Info**

```bash
kubectl cluster-info
```

- Displays information about the Kubernetes cluster.

2. **List All Resources**

```bash
kubectl get all --all-namespaces
```

- Lists all resources (pods, services, etc.) across all namespaces.

3. **Get Pod Details**

- List all pods in a specific namespace:

```bash
kubectl get pods -n <namespace>
```

- Describe a pod to see events and configuration details:

```bash
kubectl describe pod <pod-name> -n <namespace>
```

- View pod logs (helpful for debugging crashes or issues):

```bash
kubectl logs <pod-name> -n <namespace>
```

- For multi-container pods, specify the container:

```bash
kubectl logs <pod-name> -c <container-name> -n <namespace>
```

4. Checking Pod Status

- Check the status of all pods in a namespace:

```bash
kubectl get pods -n <namespace>
```

- Watch the status of pods in real-time:

```bash
kubectl get pods -n <namespace> --watch
```

5. Check Events

```bash
kubectl get events -n <namespace>
```

- Lists the recent events in a namespace, useful for identifying failures.

6. Get Node Details

- List all nodes in the cluster:

```bash
kubectl get nodes
```

- Describe a specific node:

```bash
kubectl describe node <node-name>
```

7. Debugging Pods

- If a pod is not starting, exec into the pod:

```bash
kubectl exec -it <pod-name> -n <namespace> -- /bin/sh
```

Or for bash:

```bash
kubectl exec -it <pod-name> -n <namespace> -- /bin/bash
```

8. View Resource Utilization

- CPU and memory utilization of nodes:

```bash
kubectl top nodes
```

- Resource utilization of pods:

```bash
kubectl top pods -n <namespace>
```

9. Checking Service Connectivity

- List services in a namespace:

```bash
kubectl get svc -n <namespace>
```

- Describe a specific service:

```bash
kubectl describe svc <service-name> -n <namespace>
```

10. Checking DNS Resolution

- Test DNS from within a pod (using `busybox`):

```bash
kubectl run -it --rm --image=busybox dns-test --restart=Never -- nslookup <service-nam
```

11. Check ConfigMaps & Secrets

- List ConfigMaps in a namespace:

```bash
kubectl get configmap -n <namespace>
```

- View a specific ConfigMap:

```bash
kubectl describe configmap <configmap-name> -n <namespace>
```

- List Secrets in a namespace:

```bash
kubectl get secrets -n <namespace>
```

12. Check Persistent Volumes (PVs) and Persistent Volume Claims (PVCs)

- List persistent volumes:

```bash
kubectl get pv
```

- List persistent volume claims in a namespace:

```bash
kubectl get pvc -n <namespace>
```

13. Check DaemonSet/Deployment/StatefulSet Details

- Check Deployment:

```bash
kubectl get deployment <deployment-name> -n <namespace>
kubectl describe deployment <deployment-name> -n <namespace>
```

- Check DaemonSet:

```bash
kubectl get daemonset -n <namespace>
kubectl describe daemonset <daemonset-name> -n <namespace>
```

- Check StatefulSet:

```bash
kubectl get statefulset -n <namespace>
kubectl describe statefulset <statefulset-name> -n <namespace>
```

14. Debug Network Issues

- Check pod network connectivity:

```bash
kubectl exec <pod-name> -n <namespace> -- ping <service-ip>
```

15. Interactive Troubleshooting (Kubectl Debug)

- Create a debugging pod with troubleshooting tools:

```bash
kubectl debug <pod-name> -n <namespace> --image=busybox -- /bin/sh
```