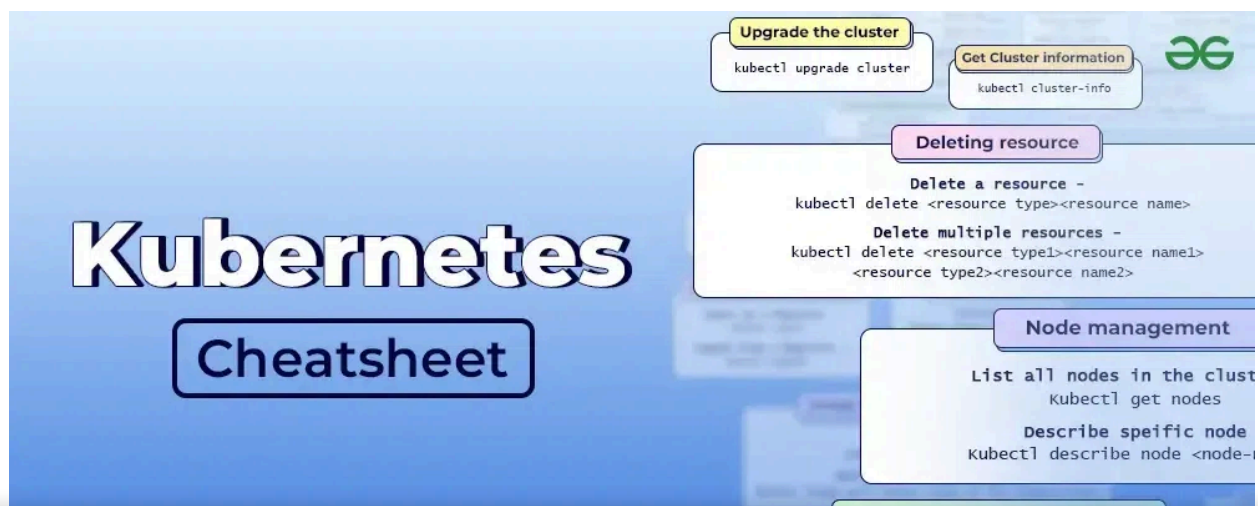


# Kubectl Command Cheat Sheet

Last Updated : 27 Feb, 2025

If you are inspired to become a DevOps (**Dev**lopment+**Op**erations)'s Engineer and start your journey as a beginner, or if you're a professional looking to refresh your DevOps knowledge or transition into DevOps, or even if you're a learning geek seeking to expand your knowledge base, then you landed to the right place. Nowadays, Kubernetes (sometimes shortened to K8s with the 8 standing for the number of letters between the “K” and the “s” ) is a trending technology in the field of DevOps, and having a good understanding of it is crucial.

The **Kubernetes Cheat Sheet** is a comprehensive guide that serves as a quick reference for learning both the basics and advanced commands of Kubernetes. Whether you are a beginner just starting your journey with Kubernetes or an experienced professional with over 5 years of experience, this guide provides all the necessary commands for managing clusters, nodes, namespaces, and more.



We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Got It !

***Pre-requisites:*** Before moving to the Cheat sheet you should have a basic understanding of What [Kubernetes](#) exactly is, what are their uses, and how it helps. and knowledge of [EKS](#), and [AKS](#) are additional advantages.

## What is Kubernetes?

**Kubernetes** is an open-source Container Management tool that automates container deployment, container scaling, and container [load balancing](#) (also called a container orchestration tool). It is written in [Golang](#) and has a vast community because it was first developed by Google and later donated to CNCF (Cloud Native Computing Foundation). Kubernetes can group 'n' number of containers into one logical unit for managing and deploying them easily. It works brilliantly with all cloud vendors i.e. public, hybrid, and on-premises.

***Kubectl (CLI):*** *Kubectl is a command line configuration tool (CLI) for kubernetes used to interact with a master node of Kubernetes. Kubectl has a config file called kubeconfig, this file has the information about the server and authentication information to access the API Server.*

## Kubernetes (Kubectl) CheatSheet

**Kubernetes CheatSheet** serves as a quick reference guide for some commands and operations which are widely used in the kubernetes cluster. In this cheat sheet, Cluster management, node management, [namespace](#) management, resource creation, resource viewing and finding, resource deletion, file and directory copying, resource patching, resource scaling, pod management, deployment management, [ReplicaSets](#) management, service management, [config maps](#) and [secrets](#), networking, [storage](#), stateful sets, monitoring, troubleshooting, and other operations will be covered.

---

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

1. **API Server**
2. **Scheduler**
3. **Controller-Manager**
4. **etcd**

## ***API Server***

*Kube API Server interacts with API, its a frontend of the kubernetes control plane. Communication center for developers and other kubernetes components. Receiving queries from multiple clients, including the kubectl command-line tool, the API server serves as the front-end interface for the Kubernetes control plane, coordinating cluster-wide operations.*

## ***Scheduler***

*The scheduler watches the pods and assigns the pods to run on specific hosts. A new pod does not have a specific node assigned when it is formed, whether by a user, a deployment controller, or a replication controller. The scheduler chooses a suitable node for the pod to run on after assessing the resource needs of the pod, such as CPU and memory usage, as well as any restrictions or affinity/anti-affinity rules supplied.*

## ***Controller-Manager***

*The controller manager runs the controllers in the background which run different tasks in the kubernetes cluster. Performs cluster-level functions(Replication, Tracking worker nodes, Handling failures).*

## ***etcd***

*etcd is a simple distributed key-value store. kubernetes uses etcd as its database to store all cluster data. Some of the data stored in etcd is job scheduling information, pods, state information and etc.*

Worker nodes are the node where the application actually runs in a kubernetes cluster, it is also known as a minion. These worker nodes are controlled by the master node using Kublet processes.

1. kubelet
2. kube-Proxy
3. Container runtime

## ***Kubelet***

*The main node agent, known as Kubelet, operates on each node and reads the container manifests to make sure that the containers are active and in good condition. It ensures that pods of containers are operating. Containers that weren't made by Kubernetes are not managed by the kubelet.*

## ***Kube-Proxy***

*By managing network rules on the host and managing connections, kube-proxy supports the kubernetes service abstraction. On nodes, Kube-proxy keeps track of network rules. Network connectivity to your pod is permitted by these network rules from both inside and outside of your cluster. Having a network proxy and load balancer for the service on a single worker node is beneficial to us.*

## ***Container Runtime***

*To process commands from the master server to run containers, each node needs a container runtime, such as Docker, containerd, or another container runtime.*

# Kubernetes (Kubectl) Commands

## ***For Cluster Management***

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl cluster-info</b>	Get cluster information.
<b>kubectl get nodes</b>	Views all the nodes present in the cluster.

### *For Node Management*

Command	Description
<b>kubectl get nodes</b>	List all nodes in the cluster.
<b>kubectl describe node &lt;node-name&gt;</b>	Describe a specific node.
<b>kubectl drain &lt;node-name&gt;</b>	Drain a node for maintenance.
<b>kubectl uncordon &lt;node-name&gt;</b>	Uncordon a node after maintenance.
<b>kubectl label node &lt;node_name&gt; &lt;key&gt;=&lt;value&gt;</b>	You can label the node by using key-value pair.
<b>kubectl label node &lt;node_name&gt; &lt;label_key&gt;-</b>	You can remove the label which is already attached to the node.

### *For Namespace Management*

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl describe namespace &lt;namespace-name&gt;</b>	Describe a namespace.
<b>kubectl create namespace &lt;namespace-name&gt;</b>	Create a namespace.
<b>kubectl get namespaces</b>	List all namespaces.
<b>kubectl config set-context --current --namespace=&lt;namespace-name&gt;</b>	Switch to a different namespace.
<b>kubectl delete namespace &lt;namespace-name&gt;</b>	Delete a namespace.
<b>kubectl edit namespace &lt;namespace_name&gt;</b>	Edit and update the namespace definition.

### *For Creating Resources*

Command	Definition
<b>kubectl apply -f &lt;resource-definition.yaml&gt;</b>	Create or Update a resource from a YAML file.
<b>kubectl create</b>	Create an object imperatively.
<b>kubectl apply -f https://url-to-resource-definition.yaml</b>	Create a resource by using the URL.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

## For Viewing and Finding Resources

Command	Description
<b>kubectl get &lt;resource-type&gt;</b>	List all resources of a specific type.
<b>kubectl get &lt;resource-type&gt; -o wide</b>	List all resources with additional details.
<b>kubectl describe &lt;resource-type&gt; &lt;resource-name&gt;</b>	Describe a specific resource.
<b>kubectl get &lt;resource-type&gt; -l &lt;label-key&gt;=&lt;label-value&gt;</b>	List all resources with a specific label.
<b>kubectl get &lt;resource-type&gt; --all-namespaces</b>	List all resources in all namespaces.
<b>kubectl get &lt;resource-type&gt; --sort-by=&lt;field&gt;</b>	List all resources sorted by a specific field.
<b>kubectl get &lt;resource-type&gt; -l &lt;label-selector&gt;</b>	List resources with a specific label selector.
<b>kubectl get &lt;resource-type&gt; --field-selector=&lt;field-selector&gt;</b>	List resources with a specific field selector.
<b>kubectl get &lt;resource-type&gt; -n &lt;namespace&gt;</b>	List all resources in a specific namespace.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

## *For Deleting Resources*

Command	Description
<b>kubectl delete &lt;resource-type&gt; &lt;resource-name&gt;</b>	Delete a resource.
<b>kubectl delete &lt;resource-type1&gt; &lt;resource-name1&gt; &lt;resource-type2&gt; &lt;resource-name2&gt;</b>	Delete multiple resources.
<b>kubectl delete &lt;resource-type&gt; --all</b>	Delete all resources of a specific type.
<b>kubectl delete -f &lt;resource-definition.yaml&gt;kubectl delete -f https://url-to-resource-definition.yaml</b>	Delete the resource by using url.
<b>kubectl delete &lt;resource-type&gt; --all -n &lt;namespace&gt;</b>	Delete all resources in a specific namespace.

## *For Copying Files and Directories*

Command	Description
<b>kubectl cp &lt;local-path&gt; &lt;namespace&gt;/&lt;pod-name&gt;:&lt;container-path&gt;</b>	Copy files and directories to a container.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).



Command	Description
	container.
<b>kubectl cp &lt;namespace&gt;/&lt;pod-name&gt;: &lt;source-container-path&gt; &lt;destination-namespace&gt;/&lt;destination-pod-name&gt;: &lt;destination-container-path&gt;</b>	Copying files from one container to another within the same pod.
<b>kubectl cp &lt;namespace&gt;/&lt;source-pod-name&gt;: &lt;source-container-path&gt; &lt;destination-namespace&gt;/&lt;destination-pod-name&gt;: &lt;destination-container-path&gt;</b>	Copying files from one container to another in a different pod.

### *For Patching Resources*

Command	Description
<b>kubectl patch &lt;resource-type&gt; &lt;resource-name&gt; -p '&lt;patch-document&gt;</b>	Patch a resource using a JSON or YAML document.
<b>kubectl patch &lt;resource-type&gt; &lt;resource-name&gt; --patch-file=&lt;patch-file&gt;</b>	Patch a resource using a JSON or YAML file.

### *For Scaling Resources*

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl scale deployment &lt;deployment-name&gt; -- replicas=&lt;replica-count&gt;</b>	Scale a deployment.
<b>kubectl scale statefulset &lt;statefulset-name&gt; -- replicas=&lt;replica-count&gt;</b>	Scale a statefulset.
<b>kubectl scale replicaset &lt;replicaset-name&gt; -- replicas=&lt;replica-count&gt;</b>	Scale a replica set.

### *For Pod Management*

Command	Description
<b>kubectl create -f &lt;pod-definition.yaml&gt;</b>	Create a pod from a YAML file.
<b>kubectl get pods</b>	List all pods in the cluster.
<b>kubectl describe pod &lt;pod-name&gt;</b>	Describe a specific pod.
<b>kubectl logs &lt;pod-name&gt;</b>	Get logs from a pod.
<b>kubectl logs -f &lt;pod-name&gt;</b>	Stream logs from a pod.
<b>kubectl logs -l &lt;label-key&gt;=&lt;label-value&gt;</b>	Get logs with a specific label.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl delete pod &lt;pod-name&gt;</b>	Delete a pod.
<b>kubectl create pod &lt;pod-name&gt;</b>	Create a pod with the name.
<b>kubectl get pod -n &lt;namespace_name&gt;</b>	List all pods in a namespace.

### *For Deployment Management*

Command	Description
<b>kubectl create deployment &lt;deployment-name&gt; --image=&lt;image-name&gt;</b>	Create a deployment.
<b>kubectl get deployments</b>	List all deployments.
<b>kubectl describe deployment &lt;deployment-name&gt;</b>	Describe a specific deployment.
<b>kubectl scale deployment &lt;deployment-name&gt; --replicas=&lt;replica-count&gt;</b>	Scale a deployment.
<b>kubectl set image deployment/&lt;deployment-name&gt; &lt;container-name&gt;=&lt;new-image-name&gt;</b>	Update a deployment's image.
<b>kubectl rollout status deployment/&lt;deployment-name&gt;</b>	Rollout status of a deployment.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl rollout pause deployment/&lt;deployment-name&gt;</b>	Pause a deployment rollout.
<b>kubectl rollout resume deployment/&lt;deployment-name&gt;</b>	Resume a deployment rollout.
<b>kubectl rollout undo deployment/&lt;deployment-name&gt;</b>	Rollback a deployment to the previous revision.
<b>kubectl rollout undo deployment/&lt;deployment-name&gt; --to-revision=&lt;revision-number&gt;</b>	Rollback a deployment to a specific revision.
<b>kubectl delete deployment &lt;deployment-name&gt;</b>	Delete deployment name.

### *For ReplicaSets Management*

Command	Description
<b>kubectl create -f &lt;replicaset-definition.yaml&gt;</b>	Create a ReplicaSet.
<b>kubectl get replicaset</b>	List all ReplicaSets.
<b>kubectl describe replicaset &lt;replicaset-name&gt;</b>	Describe a specific ReplicaSet.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

### *For Service Management*

Command	Description
<b>kubectl create service &lt;service-type&gt; &lt;service-name&gt; --tcp=&lt;port&gt;</b>	Create a service.
<b>kubectl get services</b>	List all services.
<b>kubectl expose deployment &lt;deployment-name&gt; --port=&lt;port&gt;</b>	Expose a deployment as a service.
<b>kubectl describe service &lt;service-name&gt;</b>	Describe a specific service.
<b>kubectl delete service &lt;service-name&gt;</b>	Delete a service.
<b>kubectl get endpoints &lt;service-name&gt;</b>	Get information about a service.

### *For Config Maps and Secrets*

Command	Description
<b>kubectl create configmap &lt;config-map-name&gt; --from-file=&lt;path-to-file&gt;</b>	Create a config map from a file.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl get configmaps</b>	List all config maps.
<b>kubectl get secrets</b>	List all secrets.
<b>kubectl describe configmap &lt;config-map-name&gt;</b>	Describe a specific config map.
<b>kubectl describe secret &lt;secret-name&gt;</b>	Describe a specific secret.
<b>kubectl delete secret &lt;secret_name&gt;</b>	Delete a specific secret.
<b>kubectl delete configmap &lt;config-map-name&gt;</b>	Delete a specific config map.

### *For Networking*

Command	Description
<b>kubectl port-forward &lt;pod-name&gt; &lt;local-port&gt;:&lt;pod-port&gt;</b>	Port forward to a pod.
<b>kubectl expose deployment &lt;deployment-name&gt; --type=NodePort --port=&lt;port&gt;</b>	Expose a deployment as a NodePort service.
<b>kubectl create ingress &lt;ingress-name&gt; --</b>	Create an Ingress

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Command	Description
<b>kubectl describe ingress &lt;ingress-name&gt;</b>	Get information about an Ingress.
<b>kubectl get ingress &lt;ingress-name&gt; -o jsonpath='{.spec.rules[0].host}'</b>	Retrieves the most value from the first rule of the specified Ingress resource.

### *For Storage*

Command	Description
<b>kubectl create -f &lt;persistent-volume-definition.yaml&gt;</b>	Create a PersistentVolume.
<b>kubectl get pv</b>	List all PersistentVolumes.
<b>kubectl describe pv &lt;pv-name&gt;</b>	Describe a specific PersistentVolume.
<b>kubectl create -f &lt;persistent-volume-claim-definition.yaml&gt;</b>	Create a PersistentVolumeClaim.
<b>kubectl get pvc</b>	List all PersistentVolumeClaims.
<b>kubectl describe pvc &lt;pvc-name&gt;</b>	Describe a specific PersistentVolumeClaim.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

### *For StatefulSets*

Command	Description
<b>kubectl create -f &lt;statefulset-definition.yaml&gt;</b>	Create a StatefulSet.
<b>kubectl get statefulsets</b>	List all StatefulSets.
<b>kubectl describe statefulset &lt;statefulset-name&gt;</b>	Describe a specific StatefulSet.
<b>kubectl scale statefulset &lt;statefulset-name&gt; --replicas=&lt;replica-count&gt;</b>	Scale a StatefulSet.

### *For Monitoring and Troubleshooting*

Command	Description
<b>kubectl get events</b>	Check cluster events.
<b>kubectl get component statuses</b>	Get cluster component statuses.
<b>kubectl top nodes</b>	Get resource utilization of nodes.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).



Command	Description
<b>kubect! debug &lt;pod-name&gt; -it --image= &lt;debugging-image&gt;</b>	Enable container shell access debugging.

## Miscellaneous

Command	Description
<b>kubect! delete &lt;resource-type&gt; &lt;resource-name&gt;</b>	Delete a resource.
<b>kubect! describe &lt;resource-type&gt; &lt;resource-name&gt;</b>	Get detailed information about a resource.
<b>kubect! proxy</b>	Access the Kubernetes dashboard.
<b>kubect! completion &lt;shell-type&gt;</b>	Install kubect! completion.

## Kubect! Output Verbosity and Debugging

The verbosity of kubernetes can be controlled by using a command which is kubect! verbosity. We can add no **flags** according to our requirements.

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

## Related searches

 Kubectl Commands Cheat Sheet

 Kubectl Cheat Sheet Pdf

 Kube

Command	Command
<b>kubectl get &lt;resource-type&gt; -- v=&lt;verbosity-level&gt;</b>	By using this command you set the level of verbosity output.
<b>kubectl get &lt;resource-type&gt; -- v=0</b>	Used to be visible to a cluster operator.
<b>kubectl get &lt;resource-type&gt; -- v=3</b>	You can more information like extended information about changes.
<b>kubectl get &lt;resource-type&gt; -- v=7</b>	Displays the HTTPS request headers.
<b>kubectl get &lt;resource-type&gt; -- v=8</b>	Display HTTP request contents.

## Conclusion

The Kubernetes Cheatsheet will help to have a quick reference of the most commonly used in Kubernetes (kuberctl commands). Kubernetes is one of

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

mentioned in the Cheat Sheet provide a quick reference guide for both beginners and experienced before attending any interviews also.

[Comment](#)[More info](#)[Advertise with us](#)

## Next Article

[Kubect! Command Cheat Sheet](#)

## Similar Reads

1. [Kubernetes - Kubect! Commands](#)
2. [Git Cheat Sheet](#)
3. [Docker Cheat Sheet : Complete Guide \(2024\)](#)
4. [Kubernetes - Kubect! Delete](#)
5. [Kubernetes - Dashboard Setup](#)
6. [Kubernetes - Kubect! Create and Kubect! Apply](#)
7. [How To kubect! Exec Into Pod?](#)
8. [Kubernetes - Kubect!](#)
9. [Using Commands and Arguments in a Kubernetes Pod](#)
10. [List of Useful Git Commands](#)



Corporate & Communications Address:

A-143, 7th Floor, Sovereign Corporate  
Tower, Sector- 136, Noida, Uttar Pradesh  
(201305)

Registered Address:

K 061, Tower K, Gulshan Vivante  
Apartment, Sector 137, Noida, Gautam  
Buddh Nagar, Uttar Pradesh, 201305

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).



Advertise with us

## Company

About Us  
Legal  
Privacy Policy  
Careers  
In Media  
Contact Us  
Corporate Solution  
Campus Training Program

## Tutorials

Python  
Java  
C++  
PHP  
GoLang  
SQL  
R Language  
Android

## Data Science & ML

Data Science With Python  
Machine Learning  
ML Maths  
Data Visualisation  
Pandas  
NumPy  
NLP  
Deep Learning

## Python Tutorial

Python Examples  
Django Tutorial  
Python Projects  
Python Tkinter  
Web Scraping

## Explore

Job-A-Thon  
Offline Classroom Program  
DSA in JAVA/C++  
Master System Design  
Master CP  
Videos

## DSA

Data Structures  
Algorithms  
DSA for Beginners  
Basic DSA Problems  
DSA Roadmap  
DSA Interview Questions  
Competitive Programming

## Web Technologies

HTML  
CSS  
JavaScript  
TypeScript  
ReactJS  
NextJS  
NodeJs  
Bootstrap  
Tailwind CSS

## Computer Science

GATE CS Notes  
Operating Systems  
Computer Network  
Database Management System  
Software Engineering

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).

Git  
AWS  
Docker  
Kubernetes  
Azure  
GCP  
DevOps Roadmap

High Level Design  
Low Level Design  
UML Diagrams  
Interview Guide  
Design Patterns  
OOAD  
System Design Bootcamp  
Interview Questions

### School Subjects

Mathematics  
Physics  
Chemistry  
Biology  
Social Science  
English Grammar

### Databases

SQL  
MYSQL  
PostgreSQL  
PL/SQL  
MongoDB

### Preparation Corner

Company-Wise Recruitment Process  
Aptitude Preparation  
Puzzles  
Company-Wise Preparation

### More Tutorials

Software Development  
Software Testing  
Product Management  
Project Management  
Linux  
Excel  
All Cheat Sheets

### Courses

IBM Certification Courses  
DSA and Placements  
Web Development  
Data Science  
Programming Languages  
DevOps & Cloud

### Programming Languages

C Programming with Data Structures  
C++ Programming Course  
Java Programming Course  
Python Full Course

### Clouds/Devops

DevOps Engineering  
AWS Solutions Architect Certification  
Salesforce Certified Administrator Course

### GATE 2026

GATE CS Rank Booster  
GATE DA Rank Booster  
GATE CS & IT Course - 2026  
GATE DA Course 2026  
GATE Rank Predictor

---

@GeeksforGeeks, Sanchhaya Education Private Limited, All rights reserved

We use cookies to ensure you have the best browsing experience on our website. By using our site, you acknowledge that you have read and understood our [Cookie Policy](#) & [Privacy Policy](#).