Kubernetes Object Types, API Versions, and When to Use

Kubernetes Object	API Version	When to Use	Scope
Pod	v1	Run one or more containers as a single unit (usually for testing or debugging).	Namespace
Deployment	apps/v1	Run stateless applications with rolling updates and scaling.	Namespace
ReplicaSet	apps/v1	Ensure a specified number of pod replicas are running.	Namespace
StatefulSet	apps/v1	Run stateful applications with stable identity and storage.	Namespace
DaemonSet	apps/v1	Run one pod on every (or selected) node.	Namespace
Job	batch/v1	Run a one-time batch task.	Namespace
CronJob	batch/v1	Run scheduled jobs (like Linux cron).	Namespace
Service	v1	Expose application inside or outside cluster.	Namespace
Ingress	networking.k8s.io/v1	Expose HTTP/HTTPS routes to services.	Namespace
ConfigMap	v1	Store non-sensitive configuration data.	Namespace

Secret	v1	Store sensitive data (passwords, tokens, keys).	Namespace
PersistentVolume (PV)	v1	Cluster storage resource.	Cluster
PersistentVolumeClaim (PVC)	v1	Request storage from PV.	Namespace
StorageClass	storage.k8s.io/v1	Define dynamic storage provisioning.	Cluster
Namespace	v1	Logical isolation of resources.	Cluster
ServiceAccount	v1	Identity for pods to access API.	Namespace
Role	rbac.authorization.k8s.io/v1	Define namespace-level permissions.	Namespace
ClusterRole	rbac.authorization.k8s.io/v1	Define cluster-wide permissions.	Cluster
RoleBinding	rbac.authorization.k8s.io/v1	Bind Role to user/service account.	Namespace
ClusterRoleBinding	rbac.authorization.k8s.io/v1	Bind ClusterRole to user/service account.	Cluster