# PostgreSQL APIs

Postgresqls PostgresBackup PostgresRe

# PostgreSQLs

### Description

Postgresql defines a PostgreSQL cluster managed by the Zalando Postgres Operator. It allows configuring various aspects of PostgreSQL including replication, backups, resource allocation, and more. Postgresql defines the desired state and status of a PostgreSQL cluster managed by the Zalando Postgres Operator.

### Type

`object`

### Required

`spec`

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# Specification

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | APIVersion defines the versioned schema of this representation of an object. Servers should convert recognized schemas to the latest internal value, and may reject unrecognized values. More info: https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md#resources ↗ |
| `kind` | `string` | Kind is a string value representing the REST resource this object represents. Servers may infer this from the |

| Property | Type | Description |
| --- | --- | --- |
| | | endpoint the client submits requests to. Cannot be updated. In CamelCase. More info: https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md#types-kinds ↗ |
| `metadata` | `ObjectMeta` ↗ | ObjectMeta is metadata that all persisted resources must have, which includes all objects users must create. |
| `spec` | `object` | Spec defines the desired state of the PostgreSQL cluster including configuration, resources, replication settings, and more. |
| `status` | `object` | Status defines the observed state of the PostgreSQL cluster including current status, patroni state, and any error messages. |

## .spec

### Description

Spec defines the desired state of the PostgreSQL cluster including configuration, resources, replication settings, and more.

### Type

`object`

### Required

`numberOfInstances` `postgresql` `teamId`

| Property | Type | Description |
| --- | --- | --- |
| `additionalVolumes` | `array` | AdditionalVolumes defines additional volumes for the pod |
| `allowedSourceRanges` | `array` | AllowedSourceRanges specifies IP ranges allowed to access load balancers |
| `backup` | `object` | Backup defines backup configuration |
| `clone` | `object` | Clone defines configuration for cloning from another cluster |
| `clusterReplication` | `object` | ClusterReplication defines cross-cluster replication |
| `connectionPooler` | `object` | ConnectionPooler configuration for connection pooling |
| `databases` | `object` | Databases defines databases to be created in the cluster |

| Property | Type | Description |
| --- | --- | --- |
| `dockerImage` | `string` | DockerImage specifies the container image to use for PostgreSQL instances |
| `enableConnectionPooler` | `boolean` | EnableConnectionPooler enables connection pooling for the primary instance |
| `enableExporter` | `boolean` | EnableExporter enables Prometheus exporter |
| `enableLogicalBackup` | `boolean` | EnableLogicalBackup enables logical backups for the cluster |
| `enableMasterLoadBalancer` | `boolean` | EnableMasterLoadBalancer enables load balancer for master instance |
| `enableMasterPoolerLoadBalancer` | `boolean` | EnableMasterPoolerLoadBalancer enables load balancer for master pooler |
| `enablePgpool2` | `boolean` | EnablePgpool2 enables Pgpool-II connection pooling |

| Property | Type | Description |
| --- | --- | --- |
| `enableReadinessProbe` | `boolean` | EnableReadinessProbe enables readiness probes for containers |
| `enableReplicaConnectionPooler` | `boolean` | EnableReplicaConnectionPooler enables connection pooling for replica instances |
| `enableReplicaLoadBalancer` | `boolean` | EnableReplicaLoadBalancer enables load balancer for replica instances |
| `enableReplicaPoolerLoadBalancer` | `boolean` | EnableReplicaPoolerLoadBalancer enables load balancer for replica pooler |
| `enableShmVolume` | `boolean` | ShmVolume enables shared memory volume for the pod |
| `env` | `array` | Env defines environment variables for containers |
| `exporter` | `object` | Exporter defines Prometheus exporter configuration |

| Property | Type | Description |
| --- | --- | --- |
| `init_containers` | `array` | InitContainersOld is a deprecated field for init containers |
| `initContainers` | `array` | InitContainers defines initialization containers for the pod |
| `injectPass` | `boolean` | InjectPass enables password injection for users |
| `ipFamilyPrefer` | `string` | IPFamilyPrefer specifies preferred IP family for services |
| `logicalBackupSchedule` | `string` | LogicalBackupSchedule defines the cron schedule for logical backups |
| `maintenanceWindows` | `array` | MaintenanceWindows defines time windows for maintenance operations |
| `masterServiceAnnotations` | `object` | MasterServiceAnnotations defines annotations for master service |
| `nodeAffinity` | `object` | NodeAffinity defines node affinity rules for pod scheduling |

| Property | Type | Description |
| --- | --- | --- |
| `nodeSelector` | `object` | NodeSelector defines node labels for pod scheduling |
| `numberOfInstances` | `integer` | NumberOfInstances specifies the number of PostgreSQL replicas |
| `patroni` | `object` | Patroni configuration for cluster management |
| `pgpool2Settings` | `object` | Pgpool2Settings defines Pgpool-II configuration |
| `pod_priority_class_name` | `string` | PodPriorityClassNameOld is a deprecated field for priority class |
| `podAnnotations` | `object` | PodAnnotations defines annotations to add to pods |
| `podPriorityClassName` | `string` | PodPriorityClassName specifies the priority class for pods |
| `postgresql` | `object` | PostgreSQL version and configuration parameters including: - PostgreSQL major version (e.g. "14") - Configuration parameters |

| Property | Type | Description |
| --- | --- | --- |
| | | (postgresql.conf) - Configuration parameters (postgresql.conf) PostgreSQL version and configuration parameters |
| `preparedDatabases` | `object` | PreparedDatabases defines databases with pre-configured schemas and roles |
| `repairOption` | `object` | RepairOption defines options for cluster repair |
| `replicaLoadBalancer` | `boolean` | ReplicaLoadBalancer is a deprecated field for replica load balancer |
| `replicaServiceAnnotations` | `object` | ReplicaServiceAnnotations defines annotations for replica service |
| `resources` | `object` | Resource requests and limits for PostgreSQL containers |
| `schedulerName` | `string` | SchedulerName specifies the Kubernetes scheduler to use |
| | | |

| Property | Type | Description |
| --- | --- | --- |
| `serviceAnnotations` | `object` | ServiceAnnotations defines annotations to add to services |
| `serviceTemplates` | `object` | ServiceTemplates defines custom service templates |
| `sidecars` | `array` | Sidecars defines additional containers to run in the pod |
| `spiloAllowPrivilegeEscalation` | `boolean` | SpiloAllowPrivilegeEscalation controls privilege escalation for Spilo |
| `spiloFSGroup` | `integer` | SpiloFSGroup specifies the filesystem group ID for Spilo container |
| `spiloPrivileged` | `boolean` | SpiloPrivileged enables privileged mode for Spilo container |
| `spiloReadOnlyRootFilesystem` | `boolean` | SpiloReadOnlyRootFilesystem enables read-only root filesystem for Spilo |

| Property | Type | Description |
| --- | --- | --- |
| `spiloRunAsGroup` | `integer` | SpiloRunAsGroup specifies the group ID to run Spilo container as |
| `spiloRunAsUser` | `integer` | SpiloRunAsUser specifies the user ID to run Spilo container as |
| `standby` | `object` | StandbyCluster defines configuration for standby clusters |
| `streams` | `array` | Streams defines configuration for streaming data |
| `teamId` | `string` | TeamID is the identifier of the team owning the cluster |
| `tls` | `object` | TLS defines TLS configuration for the cluster |
| `tolerations` | `array` | Tolerations defines pod tolerations for node taints |
| `upgradeOption` | `object` | UpgradeOption defines upgrade options |

| Property | Type | Description |
| --- | --- | --- |
| `useLoadBalancer` | `boolean` | UseLoadBalancer is a deprecated field for enabling load balancer |
| `users` | `object` | Users defines additional PostgreSQL users and their roles |
| `usersCustomizedPasswd` | `object` | UsersCustomizedPasswd stores custom passwords for users |
| `usersWithInPlaceSecretRotation` | `array` | UsersWithInPlaceSecretRotation defines users requiring in-place secret rotation |
| `usersWithSecretRotation` | `array` | UsersWithSecretRotation defines users requiring secret rotation |
| `volume` | `object` | Volume configuration for PostgreSQL data storage |

# .spec.additionalVolumes

### Description

AdditionalVolumes defines additional volumes for the pod

### Type

`array`

# .spec.additionalVolumes[]

### Description

AdditionalVolume defines additional volumes that can be mounted to PostgreSQL pods

### Type

`object`

### Required

`mountPath` `name` `targetContainers` `volumeSource`

| Property | Type | Description |
|---|---|---|
| `mountPath` | `string` | Path where the volume will be mounted in the container |
| `name` | `string` | Name of the volume, must be unique within the pod |
| `subPath` | `string` | SubPath within the volume to mount (optional) |
| `targetContainers` | `array` | List of container names that should mount this volume |
| `volumeSource` | `object` | Kubernetes VolumeSource defining the volume type and configuration |

# .spec.additionalVolumes[].targetContainers

### Description

List of container names that should mount this volume

### Type

`array`

## .spec.additionalVolumes[].targetContainers[]

### Type

`string`

## .spec.additionalVolumes[].volumeSource

### Description

Kubernetes VolumeSource defining the volume type and configuration

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `awsElasticBlockStore` | `object` | awsElasticBlockStore represents an AWS Disk resourc a kubelet's host machine and then exposed to the pod. https://kubernetes.io/docs/concepts/storage/volumes#a ↗ |
| `azureDisk` | `object` | azureDisk represents an Azure Data Disk mount on the mount to the pod. |
| `azureFile` | `object` | azureFile represents an Azure File Service mount on th mount to the pod. |
| `cephfs` | `object` | cephFS represents a Ceph FS mount on the host that s lifetime |

| Property | Type | Description |
| --- | --- | --- |
| `cinder` | `object` | cinder represents a cinder volume attached and mount machine. More info: https://examples.k8s.io/mysql-cind ↗ |
| `configMap` | `object` | configMap represents a configMap that should populate |
| `csi` | `object` | csi (Container Storage Interface) represents ephemera handled by certain external CSI drivers (Beta feature). |
| `downwardAPI` | `object` | downwardAPI represents downward API about the pod populate this volume |
| `emptyDir` | `object` | emptyDir represents a temporary directory that shares More info: https://kubernetes.io/docs/concepts/storage/ ↗ |
| `ephemeral` | `object` | ephemeral represents a volume that is handled by a clu The volume's lifecycle is tied to the pod that defines it - before the pod starts, and deleted when the pod is rem the volume is only needed while the pod runs, b) featur volumes like restoring from snapshot or capacity trackir the storage driver is specified through a storage class, driver supports dynamic volume provisioning through a PersistentVolumeClaim (see EphemeralVolumeSource information on the connection between this volume type PersistentVolumeClaim). Use PersistentVolumeClaim o vendor-specific APIs for volumes that persist for longer |

| Property | Type | Description |
| --- | --- | --- |
| | | an individual pod. Use CSI for light-weight local ephem<br>CSI driver is meant to be used that way - see the docur<br>driver for more information. A pod can use both types o<br>volumes and persistent volumes at the same time. |
| `fc` | `object` | fc represents a Fibre Channel resource that is attached<br>machine and then exposed to the pod. |
| `flexVolume` | `object` | flexVolume represents a generic volume resource that i<br>provisioned/attached using an exec based plugin. |
| `flocker` | `object` | flocker represents a Flocker volume attached to a kube<br>This depends on the Flocker control service being runn |
| `gcePersistentDisk` | `object` | gcePersistentDisk represents a GCE Disk resource tha<br>kubelet's host machine and then exposed to the pod. M<br>https://kubernetes.io/docs/concepts/storage/volumes#g |
| `gitRepo` | `object` | gitRepo represents a git repository at a particular revisi<br>GitRepo is deprecated. To provision a container with a<br>EmptyDir into an InitContainer that clones the repo usir<br>the EmptyDir into the Pod's container. |
| `glusterfs` | `object` | glusterfs represents a Glusterfs mount on the host that<br>lifetime. More info: https://examples.k8s.io/volumes/glu<br>↗ |

| Property | Type | Description |
| --- | --- | --- |
| `hostPath` | `object` | hostPath represents a pre-existing file or directory on th that is directly exposed to the container. This is general agents or other privileged things that are allowed to see Most containers will NOT need this. More info: https://kubernetes.io/docs/concepts/storage/volumes#h TODO(jonesdl) We need to restrict who can use host d and who can/can not mount host directories as read/wr |
| `iscsi` | `object` | iscsi represents an ISCSI Disk resource that is attache machine and then exposed to the pod. More info: https://examples.k8s.io/volumes/iscsi/README.md ↗ |
| `nfs` | `object` | nfs represents an NFS mount on the host that shares a info: https://kubernetes.io/docs/concepts/storage/volum |
| `persistentVolumeClaim` | `object` | persistentVolumeClaimVolumeSource represents a refe PersistentVolumeClaim in the same namespace. More https://kubernetes.io/docs/concepts/storage/persistent-volumes#persistentvolumeclaims ↗ |
| `photonPersistentDisk` | `object` | photonPersistentDisk represents a PhotonController pe attached and mounted on kubelets host machine |
| `portworxVolume` | `object` | portworxVolume represents a portworx volume attache kubelets host machine |

| Property | Type | Description |
| --- | --- | --- |
| `projected` | `object` | projected items for all in one resources secrets, configr downward API |
| `quobyte` | `object` | quobyte represents a Quobyte mount on the host that s lifetime |
| `rbd` | `object` | rbd represents a Rados Block Device mount on the hos pod's lifetime. More info: https://examples.k8s.io/volumes/rbd/README.md ↗ |
| `scaleIO` | `object` | scaleIO represents a ScaleIO persistent volume attach Kubernetes nodes. |
| `secret` | `object` | secret represents a secret that should populate this vol https://kubernetes.io/docs/concepts/storage/volumes#s |
| `storageos` | `object` | storageOS represents a StorageOS volume attached a Kubernetes nodes. |
| `vsphereVolume` | `object` | vsphereVolume represents a vSphere volume attached kubelets host machine |

## .spec.additionalVolumes[].volumeSource.awsElasticBlockStore

### Description

awsElasticBlockStore represents an AWS Disk resource that is attached to a kubelet's host machine and then exposed to the pod. More info: https://kubernetes.io/docs/concepts/storage/volumes#awselasticblockstore

### Type

`object`

### Required

`volumeID`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type of the volume that you want to mount. T Ensure that the filesystem type is supported by the host operating sy Examples: "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspe More info: https://kubernetes.io/docs/concepts/storage/volumes#awselasticbloc ↗ TODO: how do we prevent errors in the filesystem from comprom the machine |
| `partition` | `integer` | partition is the partition in the volume that you want to mount. If omit the default is to mount by volume name. Examples: For volume /dev you specify the partition as "1". Similarly, the volume partition for /de is "0" (or you can leave the property empty). |
| `readOnly` | `boolean` | readOnly value true will force the readOnly setting in VolumeMounts info: https://kubernetes.io/docs/concepts/storage/volumes#awselasticbloc ↗ |
| `volumeID` | `string` | volumeID is unique ID of the persistent disk resource in AWS (Amaz EBS volume). More info: |

| Property | Type | Description |
| --- | --- | --- |
| | | https://kubernetes.io/docs/concepts/storage/volumes#awselasticbloc ↗ |

# .spec.additionalVolumes[].volumeSource.azureDisk

### Description

azureDisk represents an Azure Data Disk mount on the host and bind mount to the pod.

### Type

`object`

### Required

`diskName` `diskURI`

| Property | Type | Description |
| --- | --- | --- |
| `cachingMode` | `string` | cachingMode is the Host Caching mode: None, Read Only, Read Write. |
| `diskName` | `string` | diskName is the Name of the data disk in the blob storage |
| `diskURI` | `string` | diskURI is the URI of data disk in the blob storage |
| `fsType` | `string` | fsType is Filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. |

| Property | Type | Description |
| --- | --- | --- |
| `kind` | `string` | kind expected values are Shared: multiple blob disks per storage account Dedicated: single blob disk per storage account Managed: azure managed data disk (only in managed availability set). defaults to shared |
| `readOnly` | `boolean` | readOnly Defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |

# .spec.additionalVolumes[].volumeSource.azureFile

### Description

azureFile represents an Azure File Service mount on the host and bind mount to the pod.

### Type

`object`

### Required

`secretName` `shareName`

| Property | Type | Description |
| --- | --- | --- |
| `readOnly` | `boolean` | readOnly defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |
| `secretName` | `string` | secretName is the name of secret that contains Azure Storage Account Name and Key |

| Property | Type | Description |
| --- | --- | --- |
| `shareName` | `string` | shareName is the azure share Name |

# .spec.additionalVolumes[].volumeSource.cephfs

### Description

cephFS represents a Ceph FS mount on the host that shares a pod's lifetime

### Type

`object`

### Required

`monitors`

| Property | Type | Description |
| --- | --- | --- |
| `monitors` | `array` | monitors is Required: Monitors is a collection of Ceph monitors More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it ↗ |
| `path` | `string` | path is Optional: Used as the mounted root, rather than the full Ceph tree, default is / |
| `readOnly` | `boolean` | readOnly is Optional: Defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `secretFile` | `string` | secretFile is Optional: SecretFile is the path to key ring for User, default is /etc/ceph/user.secret More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it ↗ |
| `secretRef` | `object` | secretRef is Optional: SecretRef is reference to the authentication secret for User, default is empty. More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it ↗ |
| `user` | `string` | user is optional: User is the rados user name, default is admin More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it ↗ |

# .spec.additionalVolumes[].volumeSource.cephfs.monitors

### Description

monitors is Required: Monitors is a collection of Ceph monitors More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it

### Type

`array`

# .spec.additionalVolumes[].volumeSource.cephfs.monitors[]

### Type

`string`

# .spec.additionalVolumes[].volumeSource.cephfs.secretRef

### Description

secretRef is Optional: SecretRef is reference to the authentication secret for User, default is empty. More info: https://examples.k8s.io/volumes/cephfs/README.md#how-to-use-it

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

# .spec.additionalVolumes[].volumeSource.cinder

### Description

cinder represents a cinder volume attached and mounted on kubelets host machine. More info: https://examples.k8s.io/mysql-cinder-pd/README.md

### Type

`object`

### Required

`volumeID`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type to mount. Must be a filesystem type supported by the host operating system. Examples: "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if |

| Property | Type | Description |
| --- | --- | --- |
| | | unspecified. More info: https://examples.k8s.io/mysql-cinder-pd/README.md ↗ |
| `readOnly` | `boolean` | readOnly defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. More info: https://examples.k8s.io/mysql-cinder-pd/README.md ↗ |
| `secretRef` | `object` | secretRef is optional: points to a secret object containing parameters used to connect to OpenStack. |
| `volumeID` | `string` | volumeID used to identify the volume in cinder. More info: https://examples.k8s.io/mysql-cinder-pd/README.md ↗ |

# .spec.additionalVolumes[].volumeSource.cinder.secretRef

### Description

secretRef is optional: points to a secret object containing parameters used to connect to OpenStack.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

# .spec.additionalVolumes[].volumeSource.configMap

## Description

configMap represents a configMap that should populate this volume

## Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `defaultMode` | `integer` | defaultMode is optional: mode bits used to set permissions on created files by default. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. Defaults to 0644. Directories within the path are not affected by this setting. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `items` | `array` | items if unspecified, each key-value pair in the Data field of the referenced ConfigMap will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the ConfigMap, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'. |

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | optional specify whether the ConfigMap or its keys must be defined |

# .spec.additionalVolumes[].volumeSource.configMap.items

### Description

items if unspecified, each key-value pair in the Data field of the referenced ConfigMap will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the ConfigMap, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'.

### Type

`array`

# .spec.additionalVolumes[].volumeSource.configMap.items[]

### Description

Maps a string key to a path within a volume.

### Type

`object`

### Required

`key` `path`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the key to project. |
| `mode` | `integer` | mode is Optional: mode bits used to set permissions on this file. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. If not specified, the volume defaultMode will be used. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `path` | `string` | path is the relative path of the file to map the key to. May not be an absolute path. May not contain the path element '..'. May not start with the string '..'. |

## .spec.additionalVolumes[].volumeSource.csi

### Description

csi (Container Storage Interface) represents ephemeral storage that is handled by certain external CSI drivers (Beta feature).

### Type

`object`

### Required

`driver`

| Property | Type | Description |
| --- | --- | --- |
| `driver` | `string` | driver is the name of the CSI driver that handles this volume. Consult with your admin for the correct name as registered in the cluster. |
| `fsType` | `string` | fsType to mount. Ex. "ext4", "xfs", "ntfs". If not provided, the empty value is passed to the associated CSI driver which will determine the default filesystem to apply. |
| `nodePublishSecretRef` | `object` | nodePublishSecretRef is a reference to the secret object containing sensitive information to pass to the CSI driver to complete the CSI NodePublishVolume and NodeUnpublishVolume calls. This field is optional, and may be empty if no secret is required. If the secret object contains more than one secret, all secret references are passed. |
| `readOnly` | `boolean` | readOnly specifies a read-only configuration for the volume. Defaults to false (read/write). |
| `volumeAttributes` | `object` | volumeAttributes stores driver-specific properties that are passed to the CSI driver. Consult your driver's documentation for supported values. |

# .spec.additionalVolumes[].volumeSource.csi.nodePublishSecretRef

### Description

nodePublishSecretRef is a reference to the secret object containing sensitive information to pass to the CSI driver to complete the CSI NodePublishVolume and NodeUnpublishVolume calls. This field is optional, and may be empty if no secret is required. If the secret object contains more than one secret, all secret references are passed.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

# .spec.additionalVolumes[].volumeSource.csi.volumeAttributes

### Description

volumeAttributes stores driver-specific properties that are passed to the CSI driver. Consult your driver's documentation for supported values.

### Type

`object`

# .spec.additionalVolumes[].volumeSource.downwardAPI

### Description

downwardAPI represents downward API about the pod that should populate this volume

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `defaultMode` | `integer` | Optional: mode bits to use on created files by default. Must be a Optional: mode bits used to set permissions on created files by default. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. Defaults to 0644. Directories within the path are not affected by this setting. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `items` | `array` | Items is a list of downward API volume file |

# .spec.additionalVolumes[].volumeSource.downwardAPI.items

**Description**

Items is a list of downward API volume file

**Type**

`array`

# .spec.additionalVolumes[].volumeSource.downwardAPI.items[]

**Description**

DownwardAPIVolumeFile represents information to create the file containing the pod field

### Type

`object`

### Required

`path`

| Property | Type | Description |
| --- | --- | --- |
| `fieldRef` | `object` | Required: Selects a field of the pod: only annotations, labels, name and namespace are supported. |
| `mode` | `integer` | Optional: mode bits used to set permissions on this file, must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. If not specified, the volume defaultMode will be used. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `path` | `string` | Required: Path is the relative path name of the file to be created. Must not be absolute or contain the '..' path. Must be utf-8 encoded. The first item of the relative path must not start with '..' |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, requests.cpu and requests.memory) are currently supported. |

# .spec.additionalVolumes[].volumeSource.downwardAPI.items[].fieldRef

### Description

Required: Selects a field of the pod: only annotations, labels, name and namespace are supported.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

# .spec.additionalVolumes[].volumeSource.downwardAPI.items[].resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, requests.cpu and requests.memory) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

## .spec.additionalVolumes[].volumeSource.emptyDir

### Description

emptyDir represents a temporary directory that shares a pod's lifetime. More info: https://kubernetes.io/docs/concepts/storage/volumes#emptydir

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `medium` | `string` | medium represents what type of storage medium should back this directory. The default is "" which means to use the node's default medium. Must be an empty string (default) or Memory. More info: https://kubernetes.io/docs/concepts/storage/volumes#emptydir ↗ |
| `sizeLimit` | | sizeLimit is the total amount of local storage required for this EmptyDir volume. The size limit is also applicable for memory |

| Property | Type | Description |
| --- | --- | --- |
| | | medium. The maximum usage on memory medium EmptyDir would be the minimum value between the SizeLimit specified here and the sum of memory limits of all containers in a pod. The default is nil which means that the limit is undefined. More info: https://kubernetes.io/docs/concepts/storage/volumes#emptydir ↗ |

# .spec.additionalVolumes[].volumeSource.ephemeral

### Description

ephemeral represents a volume that is handled by a cluster storage driver. The volume's lifecycle is tied to the pod that defines it - it will be created before the pod starts, and deleted when the pod is removed. Use this if: a) the volume is only needed while the pod runs, b) features of normal volumes like restoring from snapshot or capacity tracking are needed, c) the storage driver is specified through a storage class, and d) the storage driver supports dynamic volume provisioning through a PersistentVolumeClaim (see EphemeralVolumeSource for more information on the connection between this volume type and PersistentVolumeClaim). Use PersistentVolumeClaim or one of the vendor-specific APIs for volumes that persist for longer than the lifecycle of an individual pod. Use CSI for light-weight local ephemeral volumes if the CSI driver is meant to be used that way - see the documentation of the driver for more information. A pod can use both types of ephemeral volumes and persistent volumes at the same time.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `volumeClaimTemplate` | `object` | Will be used to create a stand-alone PVC to provision the volume. The pod in which this EphemeralVolumeSource is embedded will be the owner of the PVC, i.e. the PVC will be deleted |

| Property | Type | Description |
| --- | --- | --- |
| | | together with the pod. The name of the PVC will be `<pod name>-<volume name>` where `<volume name>` is the name from the `PodSpec.Volumes` array entry. Pod validation will reject the pod if the concatenated name is not valid for a PVC (for example, too long). An existing PVC with that name that is not owned by the pod will *not* be used for the pod to avoid using an unrelated volume by mistake. Starting the pod is then blocked until the unrelated PVC is removed. If such a pre-created PVC is meant to be used by the pod, the PVC has to updated with an owner reference to the pod once the pod exists. Normally this should not be necessary, but it may be useful when manually reconstructing a broken cluster. This field is read-only and no changes will be made by Kubernetes to the PVC after it has been created. Required, must not be nil. |

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate

### Description

Will be used to create a stand-alone PVC to provision the volume. The pod in which this EphemeralVolumeSource is embedded will be the owner of the PVC, i.e. the PVC will be deleted together with the pod. The name of the PVC will be `<pod name>-<volume name>` where `<volume name>` is the name from the `PodSpec.Volumes` array entry. Pod validation will reject the pod if the concatenated name is not valid for a PVC (for example, too long). An existing PVC with that name that is not owned by the pod will *not* be used for the pod to avoid using an unrelated volume by mistake. Starting the pod is then blocked until the unrelated PVC is removed. If such a pre-created PVC is meant to be used by the pod, the PVC has to updated with an owner reference to the pod once the pod exists. Normally this should not be necessary, but it may be useful when manually reconstructing a

broken cluster. This field is read-only and no changes will be made by Kubernetes to the PVC after it has been created. Required, must not be nil.

**Type**

`object`

**Required**

`spec`

| Property | Type | Description |
|---|---|---|
| `metadata` | `ObjectMeta` | May contain labels and annotations that will be copied into the PVC when creating it. No other fields are allowed and will be rejected during validation. |
| `spec` | `object` | The specification for the PersistentVolumeClaim. The entire content is copied unchanged into the PVC that gets created from this template. The same fields as in a PersistentVolumeClaim are also valid here. |

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec

**Description**

The specification for the PersistentVolumeClaim. The entire content is copied unchanged into the PVC that gets created from this template. The same fields as in a PersistentVolumeClaim are also valid here.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `accessModes` | `array` | accessModes contains the desired access modes volume should have. More info: https://kubernetes.io/docs/concepts/storage/persis volumes#access-modes-1 ↗ |
| `dataSource` | `object` | dataSource field can be used to specify either: * A existing VolumeSnapshot object (snapshot.storage.k8s.io/VolumeSnapshot) * An existing PVC (PersistentVolumeClaim) If the provisioner or an external controller can support th specified data source, it will create a new volume based on the contents of the specified data source When the AnyVolumeDataSource feature gate is enabled, dataSource contents will be copied to dataSourceRef, and dataSourceRef contents will b copied to dataSource when dataSourceRef.namespace is not specified. If the namespace is specified, then dataSourceRef will n be copied to dataSource. |
| `dataSourceRef` | `object` | dataSourceRef specifies the object from which to populate the volume with data, if a non-empty volu is desired. This may be any object from a non-emp API group (non core object) or a PersistentVolumeClaim object. When this field is specified, volume binding will only succeed if the ty of the specified object matches some installed volu populator or dynamic provisioner. This field will rep the functionality of the dataSource field and as suc both fields are non-empty, they must have the sam value. For backwards compatibility, when namespa |

| Property | Type | Description |
| --- | --- | --- |
| | | isn't specified in dataSourceRef, both fields (dataSource and dataSourceRef) will be set to the same value automatically if one of them is empty a the other is non-empty. When namespace is speci in dataSourceRef, dataSource isn't set to the same value and must be empty. There are three importa differences between dataSource and dataSourceR While dataSource only allows two specific types of objects, dataSourceRef allows any non-core objec well as PersistentVolumeClaim objects. * While dataSource ignores disallowed values (dropping them), dataSourceRef preserves all values, and generates an error if a disallowed value is specifie While dataSource only allows local objects, dataSourceRef allows objects in any namespaces (Beta) Using this field requires the AnyVolumeDataSource feature gate to be enabled (Alpha) Using the namespace field of dataSourceR requires the CrossNamespaceVolumeDataSource feature gate to be enabled. |
| `resources` | `object` | resources represents the minimum resources the volume should have. If RecoverVolumeExpansionFailure feature is enable users are allowed to specify resource requirement that are lower than previous value but must still be higher than capacity recorded in the status field of claim. More info: https://kubernetes.io/docs/concepts/storage/persis volumes#resources ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `selector` | `object` | selector is a label query over volumes to consider binding. |
| `storageClassName` | `string` | storageClassName is the name of the StorageCla required by the claim. More info: https://kubernetes.io/docs/concepts/storage/persis volumes#class-1 ↗ |
| `volumeAttributesClassName` | `string` | volumeAttributesClassName may be used to set th VolumeAttributesClass used by this claim. If specif the CSI driver will create or update the volume witl attributes defined in the corresponding VolumeAttributesClass. This has a different purpos than storageClassName, it can be changed after tl claim is created. An empty string value means that VolumeAttributesClass will be applied to the claim it's not allowed to reset this field to empty string on is set. If unspecified and the PersistentVolumeClai unbound, the default VolumeAttributesClass will be by the persistentvolume controller if it exists. If the resource referred to by volumeAttributesClass doe not exist, this PersistentVolumeClaim will be set to Pending state, as reflected by the modifyVolumeSt field, until such as a resource exists. More info: https://kubernetes.io/docs/concepts/storage/persis volumes#volumeattributesclass ↗ (Alpha) Using th field requires the VolumeAttributesClass feature ga to be enabled. |

| Property | Type | Description |
| --- | --- | --- |
| `volumeMode` | `string` | volumeMode defines what type of volume is requir by the claim. Value of Filesystem is implied when r included in claim spec. |
| `volumeName` | `string` | volumeName is the binding reference to the PersistentVolume backing this claim. |

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.accessModes

### Description

accessModes contains the desired access modes the volume should have. More info: https://kubernetes.io/docs/concepts/storage/persistent-volumes#access-modes-1

### Type

`array`

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.accessModes[]

### Type

`string`

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.dataSource

### Description

dataSource field can be used to specify either: * An existing VolumeSnapshot object (snapshot.storage.k8s.io/VolumeSnapshot) * An existing PVC (PersistentVolumeClaim) If

the provisioner or an external controller can support the specified data source, it will create a new volume based on the contents of the specified data source. When the AnyVolumeDataSource feature gate is enabled, dataSource contents will be copied to dataSourceRef, and dataSourceRef contents will be copied to dataSource when dataSourceRef.namespace is not specified. If the namespace is specified, then dataSourceRef will not be copied to dataSource.

**Type**

`object`

**Required**

`kind` `name`

| Property | Type | Description |
|---|---|---|
| `apiGroup` | `string` | APIGroup is the group for the resource being referenced. If APIGroup is not specified, the specified Kind must be in the core API group. For any other third-party types, APIGroup is required. |
| `kind` | `string` | Kind is the type of resource being referenced |
| `name` | `string` | Name is the name of resource being referenced |

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.dataSourceRef

**Description**

dataSourceRef specifies the object from which to populate the volume with data, if a non-empty volume is desired. This may be any object from a non-empty API group (non core object) or a PersistentVolumeClaim object. When this field is specified, volume binding will only succeed if the type of the specified object matches some installed volume populator or dynamic provisioner. This field will replace the functionality of the dataSource field and as

such if both fields are non-empty, they must have the same value. For backwards compatibility, when namespace isn't specified in dataSourceRef, both fields (dataSource and dataSourceRef) will be set to the same value automatically if one of them is empty and the other is non-empty. When namespace is specified in dataSourceRef, dataSource isn't set to the same value and must be empty. There are three important differences between dataSource and dataSourceRef: * While dataSource only allows two specific types of objects, dataSourceRef allows any non-core object, as well as PersistentVolumeClaim objects. * While dataSource ignores disallowed values (dropping them), dataSourceRef preserves all values, and generates an error if a disallowed value is specified. * While dataSource only allows local objects, dataSourceRef allows objects in any namespaces. (Beta) Using this field requires the AnyVolumeDataSource feature gate to be enabled. (Alpha) Using the namespace field of dataSourceRef requires the CrossNamespaceVolumeDataSource feature gate to be enabled.

**Type**

`object`

**Required**

`kind` `name`

| Property | Type | Description |
|---|---|---|
| `apiGroup` | `string` | APIGroup is the group for the resource being referenced. If APIGroup is not specified, the specified Kind must be in the core API group. For any other third-party types, APIGroup is required. |
| `kind` | `string` | Kind is the type of resource being referenced |
| `name` | `string` | Name is the name of resource being referenced |
| `namespace` | `string` | Namespace is the namespace of resource being referenced Note that when a namespace is specified, a |

| Property | Type | Description |
| --- | --- | --- |
| | | gateway.networking.k8s.io/ReferenceGrant object is required in the referent namespace to allow that namespace's owner to accept the reference. See the ReferenceGrant documentation for details. (Alpha) This field requires the CrossNamespaceVolumeDataSource feature gate to be enabled. |

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.resources

### Description

resources represents the minimum resources the volume should have. If RecoverVolumeExpansionFailure feature is enabled users are allowed to specify resource requirements that are lower than previous value but must still be higher than capacity recorded in the status field of the claim. More info: https://kubernetes.io/docs/concepts/storage/persistent-volumes#resources

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `limits` | `object` | Limits describes the maximum amount of compute resources allowed. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/ ↗ |
| `requests` | `object` | Requests describes the minimum amount of compute resources required. If Requests is omitted for a container, it defaults to Limits if that is explicitly specified, otherwise to an implementation-defined value. Requests cannot exceed Limits. |

| Property | Type | Description |
| --- | --- | --- |
| | | More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/ ↗ |

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.resources.limits

### Description

Limits describes the maximum amount of compute resources allowed. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.resources.requests

### Description

Requests describes the minimum amount of compute resources required. If Requests is omitted for a container, it defaults to Limits if that is explicitly specified, otherwise to an implementation-defined value. Requests cannot exceed Limits. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

# .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.selector

### Description

selector is a label query over volumes to consider for binding.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `matchExpressions` | `array` | matchExpressions is a list of label selector requirements. The requirements are ANDed. |
| `matchLabels` | `object` | matchLabels is a map of {key,value} pairs. A single {key,value} in the matchLabels map is equivalent to an element of matchExpressions, whose key field is "key", the operator is "In", and the values array contains only "value". The requirements are ANDed. |

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.selector.matchExpressions

**Description**

matchExpressions is a list of label selector requirements. The requirements are ANDed.

**Type**

`array`

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.selector.matchExpressions[]

**Description**

A label selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

**Type**

`object`

**Required**

`key` `operator`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the label key that the selector applies to. |
| `operator` | `string` | operator represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists and DoesNotExist. |
| `values` | `array` | values is an array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. This array is replaced during a strategic merge patch. |

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.selector.matchExpressions[].values

**Description**

values is an array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. This array is replaced during a strategic merge patch.

**Type**

`array`

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.selector.matchExpressions[].value

## s[]

### Type

`string`

## .spec.additionalVolumes[].volumeSource.ephemeral.volumeClaimTemplate.spec.selector.matchLabels

### Description

matchLabels is a map of {key,value} pairs. A single {key,value} in the matchLabels map is equivalent to an element of matchExpressions, whose key field is "key", the operator is "In", and the values array contains only "value". The requirements are ANDed.

### Type

`object`

## .spec.additionalVolumes[].volumeSource.fc

### Description

fc represents a Fibre Channel resource that is attached to a kubelet's host machine and then exposed to the pod.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. TODO: how do we prevent errors in the filesystem from compromising the machine |

| Property | Type | Description |
| --- | --- | --- |
| `lun` | `integer` | lun is Optional: FC target lun number |
| `readOnly` | `boolean` | readOnly is Optional: Defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |
| `targetWWNs` | `array` | targetWWNs is Optional: FC target worldwide names (WWNs) |
| `wwids` | `array` | wwids Optional: FC volume world wide identifiers (wwids) Either wwids or combination of targetWWNs and lun must be set, but not both simultaneously. |

## .spec.additionalVolumes[].volumeSource.fc.targetWWNs

### Description

targetWWNs is Optional: FC target worldwide names (WWNs)

### Type

`array`

## .spec.additionalVolumes[].volumeSource.fc.targetWWNs[]

### Type

`string`

## .spec.additionalVolumes[].volumeSource.fc.wwids

### Description

wwids Optional: FC volume world wide identifiers (wwids) Either wwids or combination of targetWWNs and lun must be set, but not both simultaneously.

**Type**

`array`

## .spec.additionalVolumes[].volumeSource.fc.wwids[]

**Type**

`string`

## .spec.additionalVolumes[].volumeSource.flexVolume

**Description**

flexVolume represents a generic volume resource that is provisioned/attached using an exec based plugin.

**Type**

`object`

**Required**

`driver`

| Property | Type | Description |
| --- | --- | --- |
| `driver` | `string` | driver is the name of the driver to use for this volume. |
| `fsType` | `string` | fsType is the filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". The default filesystem depends on FlexVolume script. |

| Property | Type | Description |
| --- | --- | --- |
| `options` | `object` | options is Optional: this field holds extra command options if any. |
| `readOnly` | `boolean` | readOnly is Optional: defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |
| `secretRef` | `object` | secretRef is Optional: secretRef is reference to the secret object containing sensitive information to pass to the plugin scripts. This may be empty if no secret object is specified. If the secret object contains more than one secret, all secrets are passed to the plugin scripts. |

## .spec.additionalVolumes[].volumeSource.flexVolume.options

### Description

options is Optional: this field holds extra command options if any.

### Type

`object`

## .spec.additionalVolumes[].volumeSource.flexVolume.secretRef

### Description

secretRef is Optional: secretRef is reference to the secret object containing sensitive information to pass to the plugin scripts. This may be empty if no secret object is specified.

If the secret object contains more than one secret, all secrets are passed to the plugin scripts.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

## .spec.additionalVolumes[].volumeSource.flocker

### Description

flocker represents a Flocker volume attached to a kubelet's host machine. This depends on the Flocker control service being running

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `datasetName` | `string` | datasetName is Name of the dataset stored as metadata -> name on the dataset for Flocker should be considered as deprecated |
| `datasetUUID` | `string` | datasetUUID is the UUID of the dataset. This is unique identifier of a Flocker dataset |

# .spec.additionalVolumes[].volumeSource.gcePersistentDisk

## Description

gcePersistentDisk represents a GCE Disk resource that is attached to a kubelet's host machine and then exposed to the pod. More info: https://kubernetes.io/docs/concepts/storage/volumes#gcepersistentdisk

## Type

`object`

## Required

`pdName`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is filesystem type of the volume that you want to mount. Tip: Ensure that the filesystem type is supported by the host operating system. Examples: "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" unspecified. More info: https://kubernetes.io/docs/concepts/storage/volumes#gcepersistentd ↗ TODO: how do we prevent errors in the filesystem from compromising the machine |
| `partition` | `integer` | partition is the partition in the volume that you want to mount. If omitted, the default is to mount by volume name. Examples: For volume /dev/sda1, you specify the partition as "1". Similarly, the volu partition for /dev/sda is "0" (or you can leave the property empty). M info: https://kubernetes.io/docs/concepts/storage/volumes#gcepersistentd ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `pdName` | `string` | pdName is unique name of the PD resource in GCE. Used to identify the disk in GCE. More info: https://kubernetes.io/docs/concepts/storage/volumes#gcepersistentd ↗ |
| `readOnly` | `boolean` | readOnly here will force the ReadOnly setting in VolumeMounts. Defaults to false. More info: https://kubernetes.io/docs/concepts/storage/volumes#gcepersistentd ↗ |

# .spec.additionalVolumes[].volumeSource.gitRepo

### Description

gitRepo represents a git repository at a particular revision. DEPRECATED: GitRepo is deprecated. To provision a container with a git repo, mount an EmptyDir into an InitContainer that clones the repo using git, then mount the EmptyDir into the Pod's container.

### Type

`object`

### Required

`repository`

| Property | Type | Description |
| --- | --- | --- |
| `directory` | `string` | directory is the target directory name. Must not contain or start with '..'. If '.' is supplied, the volume directory will be the git repository. Otherwise, if specified, the volume will contain the git repository in the subdirectory with the given name. |

| Property | Type | Description |
| --- | --- | --- |
| `repository` | `string` | repository is the URL |
| `revision` | `string` | revision is the commit hash for the specified revision. |

# .spec.additionalVolumes[].volumeSource.glusterfs

### Description

glusterfs represents a Glusterfs mount on the host that shares a pod's lifetime. More info: https://examples.k8s.io/volumes/glusterfs/README.md

### Type

`object`

### Required

`endpoints` `path`

| Property | Type | Description |
| --- | --- | --- |
| `endpoints` | `string` | endpoints is the endpoint name that details Glusterfs topology. More info: https://examples.k8s.io/volumes/glusterfs/README.md#create-a-pod ↗ |
| `path` | `string` | path is the Glusterfs volume path. More info: https://examples.k8s.io/volumes/glusterfs/README.md#create-a-pod ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `readOnly` | `boolean` | readOnly here will force the Glusterfs volume to be mounted with read-only permissions. Defaults to false. More info: https://examples.k8s.io/volumes/glusterfs/README.md#create-a-pod ↗ |

# .spec.additionalVolumes[].volumeSource.hostPath

### Description

hostPath represents a pre-existing file or directory on the host machine that is directly exposed to the container. This is generally used for system agents or other privileged things that are allowed to see the host machine. Most containers will NOT need this. More info: https://kubernetes.io/docs/concepts/storage/volumes#hostpath --- TODO(jonesdl) We need to restrict who can use host directory mounts and who can/can not mount host directories as read/write.

### Type

`object`

### Required

`path`

| Property | Type | Description |
| --- | --- | --- |
| `path` | `string` | path of the directory on the host. If the path is a symlink, it will follow the link to the real path. More info: https://kubernetes.io/docs/concepts/storage/volumes#hostpath ↗ |
| `type` | `string` | type for HostPath Volume Defaults to "" More info: https://kubernetes.io/docs/concepts/storage/volumes#hostpath ↗ |

# .spec.additionalVolumes[].volumeSource.iscsi

## Description

iscsi represents an ISCSI Disk resource that is attached to a kubelet's host machine and then exposed to the pod. More info: https://examples.k8s.io/volumes/iscsi/README.md

## Type

`object`

## Required

`iqn` `lun` `targetPortal`

| Property | Type | Description |
| --- | --- | --- |
| `chapAuthDiscovery` | `boolean` | chapAuthDiscovery defines whether support iSCSI Discovery CHAP authentication |
| `chapAuthSession` | `boolean` | chapAuthSession defines whether support iSCSI Session CHAP authentication |
| `fsType` | `string` | fsType is the filesystem type of the volume that you want to mount. Tip: Ensure that the filesystem type is supported by the host operating system. Examples: "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. More info: https://kubernetes.io/docs/concepts/storage/volumes#iscsi ↗ TODO: how do we prevent errors in the filesystem from compromising the machine |

| Property | Type | Description |
| --- | --- | --- |
| `initiatorName` | `string` | initiatorName is the custom iSCSI Initiator Name. If initiatorName is specified with iscsiInterface simultaneously, new iSCSI interface : will be created for the connection. |
| `iqn` | `string` | iqn is the target iSCSI Qualified Name. |
| `iscsiInterface` | `string` | iscsiInterface is the interface Name that uses an iSCSI transport. Defaults to 'default' (tcp). |
| `lun` | `integer` | lun represents iSCSI Target Lun number. |
| `portals` | `array` | portals is the iSCSI Target Portal List. The portal is either an IP or ip_addr:port if the port is other than default (typically TCP ports 860 and 3260). |
| `readOnly` | `boolean` | readOnly here will force the ReadOnly setting in VolumeMounts. Defaults to false. |
| `secretRef` | `object` | secretRef is the CHAP Secret for iSCSI target and initiator authentication |

| Property | Type | Description |
| --- | --- | --- |
| `targetPortal` | `string` | targetPortal is iSCSI Target Portal. The Portal is either an IP or ip_addr:port if the port is other than default (typically TCP ports 860 and 3260). |

## .spec.additionalVolumes[].volumeSource.iscsi.portals

### Description

portals is the iSCSI Target Portal List. The portal is either an IP or ip_addr:port if the port is other than default (typically TCP ports 860 and 3260).

### Type

`array`

## .spec.additionalVolumes[].volumeSource.iscsi.portals[]

### Type

`string`

## .spec.additionalVolumes[].volumeSource.iscsi.secretRef

### Description

secretRef is the CHAP Secret for iSCSI target and initiator authentication

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with- |

| Property | Type | Description |
| --- | --- | --- |
| | | objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

# .spec.additionalVolumes[].volumeSource.nfs

### Description

nfs represents an NFS mount on the host that shares a pod's lifetime More info: https://kubernetes.io/docs/concepts/storage/volumes#nfs

### Type

`object`

### Required

`path` `server`

| Property | Type | Description |
| --- | --- | --- |
| `path` | `string` | path that is exported by the NFS server. More info: https://kubernetes.io/docs/concepts/storage/volumes#nfs ↗ |
| `readOnly` | `boolean` | readOnly here will force the NFS export to be mounted with read-only permissions. Defaults to false. More info: https://kubernetes.io/docs/concepts/storage/volumes#nfs ↗ |
| `server` | `string` | server is the hostname or IP address of the NFS server. More info: https://kubernetes.io/docs/concepts/storage/volumes#nfs ↗ |

# .spec.additionalVolumes[].volumeSource.persistentVolumeClaim

### Description

persistentVolumeClaimVolumeSource represents a reference to a PersistentVolumeClaim in the same namespace. More info: https://kubernetes.io/docs/concepts/storage/persistent-volumes#persistentvolumeclaims

### Type

`object`

### Required

`claimName`

| Property | Type | Description |
| --- | --- | --- |
| `claimName` | `string` | claimName is the name of a PersistentVolumeClaim in the same namespace as the pod using this volume. More info: https://kubernetes.io/docs/concepts/storage/persistent-volumes#persistentvolumeclaims ↗ |
| `readOnly` | `boolean` | readOnly Will force the ReadOnly setting in VolumeMounts. Default false. |

# .spec.additionalVolumes[].volumeSource.photonPersistentDisk

### Description

photonPersistentDisk represents a PhotonController persistent disk attached and mounted on kubelets host machine

### Type

`object`

### Required

`pdID`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. |
| `pdID` | `string` | pdID is the ID that identifies Photon Controller persistent disk |

## .spec.additionalVolumes[].volumeSource.portworxVolume

### Description

portworxVolume represents a portworx volume attached and mounted on kubelets host machine

### Type

`object`

### Required

`volumeID`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fSType represents the filesystem type to mount Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs". Implicitly inferred to be "ext4" if unspecified. |
| `readOnly` | `boolean` | readOnly defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |

| Property | Type | Description |
| --- | --- | --- |
| `volumeID` | `string` | volumeID uniquely identifies a Portworx volume |

# .spec.additionalVolumes[].volumeSource.projected

### Description

projected items for all in one resources secrets, configmaps, and downward API

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `defaultMode` | `integer` | defaultMode are the mode bits used to set permissions on created files by default. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. Directories within the path are not affected by this setting. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `sources` | `array` | sources is the list of volume projections |

# .spec.additionalVolumes[].volumeSource.projected.sources

### Description

sources is the list of volume projections

### Type

`array`

## .spec.additionalVolumes[].volumeSource.projected.sources[]

### Description

Projection that may be projected along with other supported volume types

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `clusterTrustBundle` | `object` | ClusterTrustBundle allows a pod to access the `.spec.trustBundle` field of ClusterTrustBundle objects in an auto-updating file. Alpha, gated by the ClusterTrustBundleProjection feature gate. ClusterTrustBundle objects can either be selected by name, or by the combination of signer name and a label selector. Kubelet performs aggressive normalization of the PEM contents written into the pod filesystem. Esoteric PEM features such as inter-block comments and block headers are stripped. Certificates are deduplicated. The ordering of certificates within the file is arbitrary, and Kubelet may change the order over time. |
| `configMap` | `object` | configMap information about the configMap data to project |

| Property | Type | Description |
| --- | --- | --- |
| `downwardAPI` | `object` | downwardAPI information about the downwardAPI data to project |
| `secret` | `object` | secret information about the secret data to project |
| `serviceAccountToken` | `object` | serviceAccountToken is information about the serviceAccountToken data to project |

## .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle

### Description

ClusterTrustBundle allows a pod to access the `.spec.trustBundle` field of ClusterTrustBundle objects in an auto-updating file. Alpha, gated by the ClusterTrustBundleProjection feature gate. ClusterTrustBundle objects can either be selected by name, or by the combination of signer name and a label selector. Kubelet performs aggressive normalization of the PEM contents written into the pod filesystem. Esoteric PEM features such as inter-block comments and block headers are stripped. Certificates are deduplicated. The ordering of certificates within the file is arbitrary, and Kubelet may change the order over time.

### Type

`object`

### Required

`path`

| Property | Type | Description |
| --- | --- | --- |
| `labelSelector` | `object` | Select all ClusterTrustBundles that match this label selector. Only has effect if signerName is set. Mutually-exclusive with name. If unset, interpreted as "match nothing". If set but empty, interpreted as "match everything". |
| `name` | `string` | Select a single ClusterTrustBundle by object name. Mutually-exclusive with signerName and labelSelector. |
| `optional` | `boolean` | If true, don't block pod startup if the referenced ClusterTrustBundle(s) aren't available. If using name, then the named ClusterTrustBundle is allowed not to exist. If using signerName, then the combination of signerName and labelSelector is allowed to match zero ClusterTrustBundles. |
| `path` | `string` | Relative path from the volume root to write the bundle. |
| `signerName` | `string` | Select all ClusterTrustBundles that match this signer name. Mutually-exclusive with name. The contents of all selected ClusterTrustBundles will be unified and deduplicated. |

# .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle.labelSelector

### Description

Select all ClusterTrustBundles that match this label selector. Only has effect if signerName is set. Mutually-exclusive with name. If unset, interpreted as "match nothing". If set but empty, interpreted as "match everything".

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `matchExpressions` | `array` | matchExpressions is a list of label selector requirements. The requirements are ANDed. |
| `matchLabels` | `object` | matchLabels is a map of {key,value} pairs. A single {key,value} in the matchLabels map is equivalent to an element of matchExpressions, whose key field is "key", the operator is "In", and the values array contains only "value". The requirements are ANDed. |

## .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle.labelSelector.matchExpressions

**Description**

matchExpressions is a list of label selector requirements. The requirements are ANDed.

**Type**

`array`

## .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle.labelSelector.matchExpressions[]

**Description**

A label selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

### Type

`object`

### Required

`key` `operator`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the label key that the selector applies to. |
| `operator` | `string` | operator represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists and DoesNotExist. |
| `values` | `array` | values is an array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. This array is replaced during a strategic merge patch. |

## .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle.labelSelector.matchExpressions[].values

### Description

values is an array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. This array is replaced during a strategic merge patch.

### Type

`array`

# .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle.labelSelector.matchExpressions[].values[]

### Type

`string`

# .spec.additionalVolumes[].volumeSource.projected.sources[].clusterTrustBundle.labelSelector.matchLabels

### Description

matchLabels is a map of {key,value} pairs. A single {key,value} in the matchLabels map is equivalent to an element of matchExpressions, whose key field is "key", the operator is "In", and the values array contains only "value". The requirements are ANDed.

### Type

`object`

# .spec.additionalVolumes[].volumeSource.projected.sources[].configMap

### Description

configMap information about the configMap data to project

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `items` | `array` | items if unspecified, each key-value pair in the Data field of the referenced ConfigMap will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is |

| Property | Type | Description |
| --- | --- | --- |
| | | not present in the ConfigMap, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | optional specify whether the ConfigMap or its keys must be defined |

# .spec.additionalVolumes[].volumeSource.projected.sources[].configMap.items

### Description

items if unspecified, each key-value pair in the Data field of the referenced ConfigMap will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the ConfigMap, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'.

### Type

`array`

# .spec.additionalVolumes[].volumeSource.projected.sources[].configMap.items[]

### Description

Maps a string key to a path within a volume.

### Type

`object`

### Required

`key` `path`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the key to project. |
| `mode` | `integer` | mode is Optional: mode bits used to set permissions on this file. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. If not specified, the volume defaultMode will be used. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `path` | `string` | path is the relative path of the file to map the key to. May not be an absolute path. May not contain the path element '..'. May not start with the string '..'. |

## .spec.additionalVolumes[].volumeSource.projected.sources[].downwardAPI

### Description

downwardAPI information about the downwardAPI data to project

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `items` | `array` | Items is a list of DownwardAPIVolume file |

# .spec.additionalVolumes[].volumeSource.projected.sources[].downwardAPI.items

### Description

Items is a list of DownwardAPIVolume file

### Type

`array`

# .spec.additionalVolumes[].volumeSource.projected.sources[].downwardAPI.items[]

### Description

DownwardAPIVolumeFile represents information to create the file containing the pod field

### Type

`object`

### Required

`path`

| Property | Type | Description |
| --- | --- | --- |
| `fieldRef` | `object` | Required: Selects a field of the pod: only annotations, labels, name and namespace are supported. |
| `mode` | `integer` | Optional: mode bits used to set permissions on this file, must be an octal value between 0000 and 0777 or |

| Property | Type | Description |
| --- | --- | --- |
| | | a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. If not specified, the volume defaultMode will be used. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `path` | `string` | Required: Path is the relative path name of the file to be created. Must not be absolute or contain the '..' path. Must be utf-8 encoded. The first item of the relative path must not start with '..' |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, requests.cpu and requests.memory) are currently supported. |

# .spec.additionalVolumes[].volumeSource.projected.sources[].downwardAPI.items[].fieldRef

### Description

Required: Selects a field of the pod: only annotations, labels, name and namespace are supported.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

## .spec.additionalVolumes[].volumeSource.projected.sources[].downwardAPI.items[].resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, requests.cpu and requests.memory) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

# .spec.additionalVolumes[].volumeSource.projected.sources[].secret

### Description

secret information about the secret data to project

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `items` | `array` | items if unspecified, each key-value pair in the Data field of the referenced Secret will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the Secret, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | optional field specify whether the Secret or its key must be defined |

# .spec.additionalVolumes[].volumeSource.projected.sources[].secret.items

### Description

items if unspecified, each key-value pair in the Data field of the referenced Secret will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the Secret, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'.

### Type

`array`

## .spec.additionalVolumes[].volumeSource.projected.sources[].secret.items[]

### Description

Maps a string key to a path within a volume.

### Type

`object`

### Required

`key` `path`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the key to project. |
| `mode` | `integer` | mode is Optional: mode bits used to set permissions on this file. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. If not specified, the volume defaultMode will be used. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |

| Property | Type | Description |
| --- | --- | --- |
| `path` | `string` | path is the relative path of the file to map the key to. May not be an absolute path. May not contain the path element '..'. May not start with the string '..'. |

# .spec.additionalVolumes[].volumeSource.projected.sources[].serviceAccountToken

### Description

serviceAccountToken is information about the serviceAccountToken data to project

### Type

`object`

### Required

`path`

| Property | Type | Description |
| --- | --- | --- |
| `audience` | `string` | audience is the intended audience of the token. A recipient of a token must identify itself with an identifier specified in the audience of the token, and otherwise should reject the token. The audience defaults to the identifier of the apiserver. |
| `expirationSeconds` | `integer` | expirationSeconds is the requested duration of validity of the service account token. As the token approaches expiration, the kubelet volume plugin will proactively rotate the service account token. The kubelet will start trying to rotate the token if the token is older than 80 percent of its time to live or if the |

| Property | Type | Description |
| --- | --- | --- |
| | | token is older than 24 hours.Defaults to 1 hour and must be at least 10 minutes. |
| `path` | `string` | path is the path relative to the mount point of the file to project the token into. |

## .spec.additionalVolumes[].volumeSource.quobyte

### Description

quobyte represents a Quobyte mount on the host that shares a pod's lifetime

### Type

`object`

### Required

`registry` `volume`

| Property | Type | Description |
| --- | --- | --- |
| `group` | `string` | group to map volume access to Default is no group |
| `readOnly` | `boolean` | readOnly here will force the Quobyte volume to be mounted with read-only permissions. Defaults to false. |
| `registry` | `string` | registry represents a single or multiple Quobyte Registry services specified as a string as host:port pair (multiple entries are separated with commas) which acts as the central registry for volumes |

| Property | Type | Description |
| --- | --- | --- |
| `tenant` | `string` | tenant owning the given Quobyte volume in the Backend Used with dynamically provisioned Quobyte volumes, value is set by the plugin |
| `user` | `string` | user to map volume access to Defaults to serivceaccount user |
| `volume` | `string` | volume is a string that references an already created Quobyte volume by name. |

## .spec.additionalVolumes[].volumeSource.rbd

### Description

rbd represents a Rados Block Device mount on the host that shares a pod's lifetime. More info: https://examples.k8s.io/volumes/rbd/README.md

### Type

`object`

### Required

`image` `monitors`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type of the volume that you want to mount. Tip: Ensure that the filesystem type is supported by the host operating system. Examples: "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. More info: https://kubernetes.io/docs/concepts/storage/volumes#rbd ↗ TODO: how do we prevent errors in the filesystem from compromising the machine |
| `image` | `string` | image is the rados image name. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |
| `keyring` | `string` | keyring is the path to key ring for RBDUser. Default is /etc/ceph/keyring. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |
| `monitors` | `array` | monitors is a collection of Ceph monitors. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |
| `pool` | `string` | pool is the rados pool name. Default is rbd. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |
| `readOnly` | `boolean` | readOnly here will force the ReadOnly setting in VolumeMounts. Defaults to false. More info: |

| Property | Type | Description |
| --- | --- | --- |
| | | https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |
| `secretRef` | `object` | secretRef is name of the authentication secret for RBDUser. If provided overrides keyring. Default is nil. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |
| `user` | `string` | user is the rados user name. Default is admin. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it ↗ |

# .spec.additionalVolumes[].volumeSource.rbd.monitors

### Description

monitors is a collection of Ceph monitors. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it

### Type

`array`

# .spec.additionalVolumes[].volumeSource.rbd.monitors[]

### Type

`string`

# .spec.additionalVolumes[].volumeSource.rbd.secretRef

### Description

secretRef is name of the authentication secret for RBDUser. If provided overrides keyring. Default is nil. More info: https://examples.k8s.io/volumes/rbd/README.md#how-to-use-it

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

## .spec.additionalVolumes[].volumeSource.scaleIO

**Description**

scaleIO represents a ScaleIO persistent volume attached and mounted on Kubernetes nodes.

**Type**

`object`

**Required**

`gateway` `secretRef` `system`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". Default is "xfs". |
| `gateway` | `string` | gateway is the host address of the ScaleIO API Gateway. |

| Property | Type | Description |
| --- | --- | --- |
| `protectionDomain` | `string` | protectionDomain is the name of the ScaleIO Protection Domain for the configured storage. |
| `readOnly` | `boolean` | readOnly Defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |
| `secretRef` | `object` | secretRef references to the secret for ScaleIO user and other sensitive information. If this is not provided, Login operation will fail. |
| `sslEnabled` | `boolean` | sslEnabled Flag enable/disable SSL communication with Gateway, default false |
| `storageMode` | `string` | storageMode indicates whether the storage for a volume should be ThickProvisioned or ThinProvisioned. Default is ThinProvisioned. |
| `storagePool` | `string` | storagePool is the ScaleIO Storage Pool associated with the protection domain. |
| `system` | `string` | system is the name of the storage system as configured in ScaleIO. |
| `volumeName` | `string` | volumeName is the name of a volume already created in the ScaleIO system that is associated with this |

| Property | Type | Description |
| --- | --- | --- |
| | | volume source. |

# .spec.additionalVolumes[].volumeSource.scaleIO.secretRef

### Description

secretRef references to the secret for ScaleIO user and other sensitive information. If this is not provided, Login operation will fail.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

# .spec.additionalVolumes[].volumeSource.secret

### Description

secret represents a secret that should populate this volume. More info: https://kubernetes.io/docs/concepts/storage/volumes#secret

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `defaultMode` | `integer` | defaultMode is Optional: mode bits used to set permissions on created files by default. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. Defaults to 0644. Directories within the path are not affected by this setting. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |
| `items` | `array` | items If unspecified, each key-value pair in the Data field of the referenced Secret will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the Secret, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'. |
| `optional` | `boolean` | optional field specify whether the Secret or its keys must be defined |
| `secretName` | `string` | secretName is the name of the secret in the pod's namespace to use. More info: https://kubernetes.io/docs/concepts/storage/volumes#secret ↗ |

## .spec.additionalVolumes[].volumeSource.secret.items

### Description

items If unspecified, each key-value pair in the Data field of the referenced Secret will be projected into the volume as a file whose name is the key and content is the value. If specified, the listed keys will be projected into the specified paths, and unlisted keys will not be present. If a key is specified which is not present in the Secret, the volume setup will error unless it is marked optional. Paths must be relative and may not contain the '..' path or start with '..'.

### Type

`array`

## .spec.additionalVolumes[].volumeSource.secret.items[]

### Description

Maps a string key to a path within a volume.

### Type

`object`

### Required

`key` `path`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the key to project. |
| `mode` | `integer` | mode is Optional: mode bits used to set permissions on this file. Must be an octal value between 0000 and 0777 or a decimal value between 0 and 511. YAML accepts both octal and decimal values, JSON requires decimal values for mode bits. If not specified, the volume defaultMode will be used. This might be in conflict with other options that affect the file mode, like fsGroup, and the result can be other mode bits set. |

| Property | Type | Description |
| --- | --- | --- |
| `path` | `string` | path is the relative path of the file to map the key to. May not be an absolute path. May not contain the path element '..'. May not start with the string '..'. |

# .spec.additionalVolumes[].volumeSource.storageos

### Description

storageOS represents a StorageOS volume attached and mounted on Kubernetes nodes.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is the filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. |
| `readOnly` | `boolean` | readOnly defaults to false (read/write). ReadOnly here will force the ReadOnly setting in VolumeMounts. |
| `secretRef` | `object` | secretRef specifies the secret to use for obtaining the StorageOS API credentials. If not specified, default values will be attempted. |
| `volumeName` | `string` | volumeName is the human-readable name of the StorageOS volume. Volume names are only unique |

| Property | Type | Description |
| --- | --- | --- |
| | | within a namespace. |
| `volumeNamespace` | `string` | volumeNamespace specifies the scope of the volume within StorageOS. If no namespace is specified then the Pod's namespace will be used. This allows the Kubernetes name scoping to be mirrored within StorageOS for tighter integration. Set VolumeName to any name to override the default behaviour. Set to "default" if you are not using namespaces within StorageOS. Namespaces that do not pre-exist within StorageOS will be created. |

## .spec.additionalVolumes[].volumeSource.storageos.secretRef

### Description

secretRef specifies the secret to use for obtaining the StorageOS API credentials. If not specified, default values will be attempted.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

## .spec.additionalVolumes[].volumeSource.vsphereVolume

### Description

vsphereVolume represents a vSphere volume attached and mounted on kubelets host machine

### Type

`object`

### Required

`volumePath`

| Property | Type | Description |
| --- | --- | --- |
| `fsType` | `string` | fsType is filesystem type to mount. Must be a filesystem type supported by the host operating system. Ex. "ext4", "xfs", "ntfs". Implicitly inferred to be "ext4" if unspecified. |
| `storagePolicyID` | `string` | storagePolicyID is the storage Policy Based Management (SPBM) profile ID associated with the StoragePolicyName. |
| `storagePolicyName` | `string` | storagePolicyName is the storage Policy Based Management (SPBM) profile name. |
| `volumePath` | `string` | volumePath is the path that identifies vSphere volume vmdk |

## .spec.allowedSourceRanges

### Description

AllowedSourceRanges specifies IP ranges allowed to access load balancers

### Type

`array`

## .spec.allowedSourceRanges[]

### Type

`string`

## .spec.backup

### Description

Backup defines backup configuration

### Type

`object`

### Required

`storage`

| Property | Type | Description |
| --- | --- | --- |
| `resources` | `object` | Resources describes requests and limits for the Backup sidecar resouces. |
| `retainDay` | `integer` | RetainDay specifies how many days to retain backup files before deletion |
| `schedule` | `string` | Schedule defines the cron schedule for automated backups (e.g. "0 0 * * *" for daily at midnight) |

| Property | Type | Description |
| --- | --- | --- |
| `storage` | `object` | storage defines the configuration for backup storage including the storage name, namespace, and bucket location. |

# .spec.backup.resources

### Description

Resources describes requests and limits for the Backup sidecar resouces.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `limits` | `object` | ResourceLimits defines the maximum resources allowed for containers |
| `requests` | `object` | ResourceRequests defines the minimum resources required for containers |

# .spec.backup.resources.limits

### Description

ResourceLimits defines the maximum resources allowed for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.backup.resources.requests

### Description

ResourceRequests defines the minimum resources required for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.backup.storage

### Description

storage defines the configuration for backup storage including the storage name, namespace, and bucket location.

### Type

`object`

### Required

`bucket` `name` `namespace`

| Property | Type | Description |
| --- | --- | --- |
| `bucket` | `string` | S3 bucket name |
| `name` | `string` | Name of the storage configuration to use for backups |
| `namespace` | `string` | Namespace where the storage configuration is defined |

# .spec.clone

### Description

Clone defines configuration for cloning from another cluster

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cluster` | `string` | ClusterName specifies the name of the source cluster to clone from |
| `s3_access_key_id` | `string` | S3AccessKeyId specifies the access key ID for S3 authentication |
| `s3_endpoint` | `string` | S3Endpoint specifies the S3-compatible storage endpoint |

| Property | Type | Description |
| --- | --- | --- |
| `s3_force_path_style` | `boolean` | S3ForcePathStyle enables path-style S3 URLs (bucket.s3.amazonaws.com) |
| `s3_secret_access_key` | `string` | S3SecretAccessKey specifies the secret access key for S3 authentication |
| `s3_wal_path` | `string` | S3WalPath specifies the S3 path containing WAL files for PITR cloning |
| `timestamp` | `string` | EndTimestamp specifies the point-in-time to clone up to (RFC3339 format) |
| `uid` | `string` | UID specifies the unique identifier of the source cluster |

# .spec.clusterReplication

### Description

ClusterReplication defines cross-cluster replication

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `bootstrapSecret` | `string` | BootstrapSecret contains credentials for initial replication setup |
| `enabled` | `boolean` | Enabled controls whether cross-cluster replication is active |
| `isReplica` | `boolean` | IsReplica indicates if this cluster should act as a replica |
| `peerHost` | `string` | PeerHost specifies the hostname or IP of the peer cluster |
| `peerPort` | `integer` | PeerPort specifies the port number for connecting to the peer cluster |
| `replSvcType` | `string` | ReplSvcType defines the Kubernetes Service type for replication traffic |
| `syncMode` | `boolean` | SyncMode enables synchronous replication between clusters |

# .spec.connectionPooler

### Description

ConnectionPooler configuration for connection pooling

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `dockerImage` | `string` | DockerImage specifies the container image to use for the connection pooler. If not specified, uses the default image configured in the operator. |
| `maxDBConnections` | `integer` | MaxDBConnections defines the maximum number of database connections that the pooler will maintain to PostgreSQL. Defaults to 60 if not specified. |
| `mode` | `string` | Mode defines the connection pooling mode. Can be "session" or "transaction". In session mode, connections are held for the duration of a client session. In transaction mode, connections are returned to the pool after each transaction. Defaults to "transaction" if not specified. |
| `numberOfInstances` | `integer` | NumberOfInstances specifies how many connection pooler instances to run. If not set, defaults to 1 for PgBouncer or 2 for Pgpool-II. |
| `resources` | `object` | Resources defines CPU and memory requirements for the connection pooler containers. If not specified, uses operator defaults. |

| Property | Type | Description |
| --- | --- | --- |
| `schema` | `string` | Schema specifies the database schema where connection pooler will operate. Defaults to "pooler" if not specified. |
| `user` | `string` | User specifies the database user that the connection pooler will use. Defaults to "pooler" if not specified. |

# .spec.connectionPooler.resources

### Description

Resources defines CPU and memory requirements for the connection pooler containers. If not specified, uses operator defaults.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `limits` | `object` | ResourceLimits defines the maximum resources allowed for containers |
| `requests` | `object` | ResourceRequests defines the minimum resources required for containers |

# .spec.connectionPooler.resources.limits

### Description

ResourceLimits defines the maximum resources allowed for containers

**Type**

`object`

| Property | Type | Description |
|---|---|---|
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.connectionPooler.resources.requests

**Description**

ResourceRequests defines the minimum resources required for containers

**Type**

`object`

| Property | Type | Description |
|---|---|---|
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.databases

**Description**

Databases defines databases to be created in the cluster

**Type**

`object`

# .spec.env

### Description

Env defines environment variables for containers

### Type

`array`

# .spec.env[]

### Description

EnvVar represents an environment variable present in a Container.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the environment variable. Must be a C_IDENTIFIER. |
| `value` | `string` | Variable references $(VAR_NAME) are expanded using the previously defined environment variables in the container and any service environment variables. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Defaults to "". |

| Property | Type | Description |
| --- | --- | --- |
| `valueFrom` | `object` | Source for the environment variable's value. Cannot be used if value is not empty. |

# .spec.env[].valueFrom

### Description

Source for the environment variable's value. Cannot be used if value is not empty.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapKeyRef` | `object` | Selects a key of a ConfigMap. |
| `fieldRef` | `object` | Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs. |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported. |

| Property | Type | Description |
| --- | --- | --- |
| `secretKeyRef` | `object` | Selects a key of a secret in the pod's namespace |

# .spec.env[].valueFrom.configMapKeyRef

### Description

Selects a key of a ConfigMap.

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key to select. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the ConfigMap or its key must be defined |

# .spec.env[].valueFrom.fieldRef

### Description

Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

## .spec.env[].valueFrom.resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

## .spec.env[].valueFrom.secretKeyRef

### Description

Selects a key of a secret in the pod's namespace

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key of the secret to select from. Must be a valid secret key. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names↗ TODO: Add other useful fields. apiVersion, kind, uid? |

| Property | Type | Description |
| --- | --- | --- |
| `optional` | `boolean` | Specify whether the Secret or its key must be defined |

# .spec.exporter

### Description

Exporter defines Prometheus exporter configuration

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `env` | `array` | |

# .spec.exporter.env

### Type

`array`

# .spec.exporter.env[]

### Description

EnvVar represents an environment variable present in a Container.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the environment variable. Must be a C_IDENTIFIER. |
| `value` | `string` | Variable references $(VAR_NAME) are expanded using the previously defined environment variables in the container and any service environment variables. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Defaults to "". |
| `valueFrom` | `object` | Source for the environment variable's value. Cannot be used if value is not empty. |

# .spec.exporter.env[].valueFrom

### Description

Source for the environment variable's value. Cannot be used if value is not empty.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapKeyRef` | `object` | Selects a key of a ConfigMap. |

| Property | Type | Description |
| --- | --- | --- |
| `fieldRef` | `object` | Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs. |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported. |
| `secretKeyRef` | `object` | Selects a key of a secret in the pod's namespace |

## .spec.exporter.env[].valueFrom.configMapKeyRef

### Description

Selects a key of a ConfigMap.

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key to select. |

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the ConfigMap or its key must be defined |

# .spec.exporter.env[].valueFrom.fieldRef

### Description

Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

# .spec.exporter.env[].valueFrom.resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

## .spec.exporter.env[].valueFrom.secretKeyRef

### Description

Selects a key of a secret in the pod's namespace

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key of the secret to select from. Must be a valid secret key. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the Secret or its key must be defined |

# .spec.init_containers

### Description

InitContainersOld is a deprecated field for init containers

### Type

`array`

# .spec.init_containers[]

### Description

A single application container that you want to run within a pod.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `args` | `array` | Arguments to the entrypoint. The container image' if this is not provided. Variable references $(VAR_I expanded using the container's environment. If a v be resolved, the reference in the input string will be Double $$ are reduced to a single $, which allows the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" w string literal "$(VAR_NAME)". Escaped references expanded, regardless of whether the variable exist Cannot be updated. More info: https://kubernetes.io/docs/tasks/inject-data-applica command-argument-container/#running-a-comma |
| `command` | `array` | Entrypoint array. Not executed within a shell. The c image's ENTRYPOINT is used if this is not provide references $(VAR_NAME) are expanded using the environment. If a variable cannot be resolved, the the input string will be unchanged. Double $$ are r single $, which allows for escaping the $(VAR_NA i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be regardless of whether the variable exists or not. Ca updated. More info: https://kubernetes.io/docs/task application/define-command-argument-container/# command-in-a-shell ↗ |
| `env` | `array` | List of environment variables to set in the containe updated. |
| `envFrom` | `array` | List of sources to populate environment variables i container. The keys defined within a source must b |

| Property | Type | Description |
| --- | --- | --- |
| | | C_IDENTIFIER. All invalid keys will be reported as when the container is starting. When a key exists i sources, the value associated with the last source precedence. Values defined by an Env with a dupl take precedence. Cannot be updated. |
| `image` | `string` | Container image name. More info: https://kubernetes.io/docs/concepts/containers/ima field is optional to allow higher level config manage default or override container images in workload c Deployments and StatefulSets. |
| `imagePullPolicy` | `string` | Image pull policy. One of Always, Never, IfNotPres to Always if :latest tag is specified, or IfNotPresent Cannot be updated. More info: https://kubernetes.io/docs/concepts/containers/ima images ↗ |
| `lifecycle` | `object` | Actions that the management system should take container lifecycle events. Cannot be updated. |
| `livenessProbe` | `object` | Periodic probe of container liveness. Container wil the probe fails. Cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/poc lifecycle#container-probes ↗ |
| `name` | `string` | Name of the container specified as a DNS_LABEL container in a pod must have a unique name (DNS |

| Property | Type | Description |
| --- | --- | --- |
| | | Cannot be updated. |
| `ports` | `array` | List of ports to expose from the container. Not spe here DOES NOT prevent that port from being expo which is listening on the default "0.0.0.0" address i container will be accessible from the network. Mod array with strategic merge patch may corrupt the d information See https://github.com/kubernetes/kubernetes/issues/1 Cannot be updated. |
| `readinessProbe` | `object` | Periodic probe of container service readiness. Cor removed from service endpoints if the probe fails. updated. More info: https://kubernetes.io/docs/concepts/workloads/poc lifecycle#container-probes ↗ |
| `resizePolicy` | `array` | Resources resize policy for the container. |
| `resources` | `object` | Compute Resources required by this container. Ca updated. More info: https://kubernetes.io/docs/concepts/configuration/r resources-containers/ ↗ |
| `restartPolicy` | `string` | RestartPolicy defines the restart behavior of indivi in a pod. This field may only be set for init containe only allowed value is "Always". For non-init contair this field is not specified, the restart behavior is de |

| Property | Type | Description |
| --- | --- | --- |
| | | Pod's restart policy and the container type. Setting RestartPolicy as "Always" for the init container will following effect: this init container will be continuall exit until all regular containers have terminated. Or containers have completed, all init containers with "Always" will be shut down. This lifecycle differs fro containers and is often referred to as a "sidecar" c Although this init container still starts in the init cor sequence, it does not wait for the container to com proceeding to the next init container. Instead, the r container starts immediately after this init containe after any startupProbe has successfully completed |
| `securityContext` | `object` | SecurityContext defines the security options the co be run with. If set, the fields of SecurityContext ove equivalent fields of PodSecurityContext. More info https://kubernetes.io/docs/tasks/configure-pod-container/security-context/ ↗ |
| `startupProbe` | `object` | StartupProbe indicates that the Pod has successfu If specified, no other probes are executed until this successfully. If this probe fails, the Pod will be rest the livenessProbe failed. This can be used to prov probe parameters at the beginning of a Pod's lifecy might take a long time to load data or warm a cach steady-state operation. This cannot be updated. M https://kubernetes.io/docs/concepts/workloads/poc lifecycle#container-probes ↗ |
| `stdin` | `boolean` | Whether this container should allocate a buffer for container runtime. If this is not set, reads from stdi |

| Property | Type | Description |
| --- | --- | --- |
| | | container will always result in EOF. Default is false |
| `stdinOnce` | `boolean` | Whether the container runtime should close the st after it has been opened by a single attach. When the stdin stream will remain open across multiple a sessions. If stdinOnce is set to true, stdin is opene start, is empty until the first client attaches to stdin remains open and accepts data until the client disc which time stdin is closed and remains closed unti is restarted. If this flag is false, a container process from stdin will never receive an EOF. Default is fals |
| `terminationMessagePath` | `string` | Optional: Path at which the file to which the contai termination message will be written is mounted int container's filesystem. Message written is intended final status, such as an assertion failure message. truncated by the node if greater than 4096 bytes. T message length across all containers will be limite Defaults to /dev/termination-log. Cannot be update |
| `terminationMessagePolicy` | `string` | Indicate how the termination message should be p will use the contents of terminationMessagePath t container status message on both success and fai FallbackToLogsOnError will use the last chunk of c output if the termination message file is empty and exited with an error. The log output is limited to 20 lines, whichever is smaller. Defaults to File. Canno |
| | | |

| Property | Type | Description |
| --- | --- | --- |
| `tty` | `boolean` | Whether this container should allocate a TTY for it requires 'stdin' to be true. Default is false. |
| `volumeDevices` | `array` | volumeDevices is the list of block devices to be us container. |
| `volumeMounts` | `array` | Pod volumes to mount into the container's filesyste updated. |
| `workingDir` | `string` | Container's working directory. If not specified, the runtime's default will be used, which might be conf container image. Cannot be updated. |

# .spec.init_containers[].args

### Description

Arguments to the entrypoint. The container image's CMD is used if this is not provided. Variable references $(VAR_NAME) are expanded using the container's environment. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Cannot be updated. More info: https://kubernetes.io/docs/tasks/inject-data-application/define-command-argument-container/#running-a-command-in-a-shell

### Type

`array`

# .spec.init_containers[].args[]

### Type

`string`

# .spec.init_containers[].command

### Description

Entrypoint array. Not executed within a shell. The container image's ENTRYPOINT is used if this is not provided. Variable references $(VAR_NAME) are expanded using the container's environment. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Cannot be updated. More info: https://kubernetes.io/docs/tasks/inject-data-application/define-command-argument-container/#running-a-command-in-a-shell

### Type

`array`

# .spec.init_containers[].command[]

### Type

`string`

# .spec.init_containers[].env

### Description

List of environment variables to set in the container. Cannot be updated.

### Type

`array`

# .spec.init_containers[].env[]

### Description

EnvVar represents an environment variable present in a Container.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the environment variable. Must be a C_IDENTIFIER. |
| `value` | `string` | Variable references $(VAR_NAME) are expanded using the previously defined environment variables in the container and any service environment variables. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Defaults to "". |
| `valueFrom` | `object` | Source for the environment variable's value. Cannot be used if value is not empty. |

## .spec.init_containers[].env[].valueFrom

### Description

Source for the environment variable's value. Cannot be used if value is not empty.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapKeyRef` | `object` | Selects a key of a ConfigMap. |
| `fieldRef` | `object` | Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs. |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported. |
| `secretKeyRef` | `object` | Selects a key of a secret in the pod's namespace |

## .spec.init_containers[].env[].valueFrom.configMapKeyRef

### Description

Selects a key of a ConfigMap.

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key to select. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the ConfigMap or its key must be defined |

# .spec.init_containers[].env[].valueFrom.fieldRef

### Description

Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |

| Property | Type | Description |
| --- | --- | --- |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

# .spec.init_containers[].env[].valueFrom.resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

# .spec.init_containers[].env[].valueFrom.secretKeyRef

### Description

Selects a key of a secret in the pod's namespace

**Type**

`object`

**Required**

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key of the secret to select from. Must be a valid secret key. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the Secret or its key must be defined |

# .spec.init_containers[].envFrom

**Description**

List of sources to populate environment variables in the container. The keys defined within a source must be a C_IDENTIFIER. All invalid keys will be reported as an event when the container is starting. When a key exists in multiple sources, the value associated with the last source will take precedence. Values defined by an Env with a duplicate key will take precedence. Cannot be updated.

**Type**

`array`

# .spec.init_containers[].envFrom[]

### Description

EnvFromSource represents the source of a set of ConfigMaps

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapRef` | `object` | The ConfigMap to select from |
| `prefix` | `string` | An optional identifier to prepend to each key in the ConfigMap. Must be a C_IDENTIFIER. |
| `secretRef` | `object` | The Secret to select from |

## .spec.init_containers[].envFrom[].configMapRef

### Description

The ConfigMap to select from

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names↗ TODO: Add other useful fields. apiVersion, kind, uid? |

| Property | Type | Description |
| --- | --- | --- |
| `optional` | `boolean` | Specify whether the ConfigMap must be defined |

# .spec.init_containers[].envFrom[].secretRef

### Description

The Secret to select from

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the Secret must be defined |

# .spec.init_containers[].lifecycle

### Description

Actions that the management system should take in response to container lifecycle events. Cannot be updated.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `postStart` | `object` | PostStart is called immediately after a container is created. If the handler fails, the container is terminated and restarted according to its restart policy. Other management of the container blocks until the hook completes. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks ↗ |
| `preStop` | `object` | PreStop is called immediately before a container is terminated due to an API request or management event such as liveness/startup probe failure, preemption, resource contention, etc. The handler is not called if the container crashes or exits. The Pod's termination grace period countdown begins before the PreStop hook is executed. Regardless of the outcome of the handler, the container will eventually terminate within the Pod's termination grace period (unless delayed by finalizers). Other management of the container blocks until the hook completes or until the termination grace period is reached. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks ↗ |

# .spec.init_containers[].lifecycle.postStart

### Description

PostStart is called immediately after a container is created. If the handler fails, the container is terminated and restarted according to its restart policy. Other management of the container blocks until the hook completes. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `httpGet` | `object` | HTTPGet specifies the http request to perform. |
| `sleep` | `object` | Sleep represents the duration that the container should sleep before being terminated. |
| `tcpSocket` | `object` | Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified. |

# .spec.init_containers[].lifecycle.postStart.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.init_containers[].lifecycle.postStart.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.init_containers[].lifecycle.postStart.exec.command[]

### Type

`string`

## .spec.init_containers[].lifecycle.postStart.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

## .spec.init_containers[].lifecycle.postStart.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.init_containers[].lifecycle.postStart.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.init_containers[].lifecycle.postStart.sleep

### Description

Sleep represents the duration that the container should sleep before being terminated.

### Type

`object`

### Required

`seconds`

| Property | Type | Description |
| --- | --- | --- |
| `seconds` | `integer` | Seconds is the number of seconds to sleep. |

# .spec.init_containers[].lifecycle.postStart.tcpSocket

### Description

Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.init_containers[].lifecycle.preStop

### Description

PreStop is called immediately before a container is terminated due to an API request or management event such as liveness/startup probe failure, preemption, resource contention, etc. The handler is not called if the container crashes or exits. The Pod's termination grace

period countdown begins before the PreStop hook is executed. Regardless of the outcome of the handler, the container will eventually terminate within the Pod's termination grace period (unless delayed by finalizers). Other management of the container blocks until the hook completes or until the termination grace period is reached. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks

**Type**

`object`

| Property | Type | Description |
|---|---|---|
| `exec` | `object` | Exec specifies the action to take. |
| `httpGet` | `object` | HTTPGet specifies the http request to perform. |
| `sleep` | `object` | Sleep represents the duration that the container should sleep before being terminated. |
| `tcpSocket` | `object` | Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified. |

# .spec.init_containers[].lifecycle.preStop.exec

**Description**

Exec specifies the action to take.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.init_containers[].lifecycle.preStop.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.init_containers[].lifecycle.preStop.exec.command[]

### Type

`string`

## .spec.init_containers[].lifecycle.preStop.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

## .spec.init_containers[].lifecycle.preStop.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.init_containers[].lifecycle.preStop.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.init_containers[].lifecycle.preStop.sleep

### Description

Sleep represents the duration that the container should sleep before being terminated.

### Type

`object`

### Required

`seconds`

| Property | Type | Description |
| --- | --- | --- |
| `seconds` | `integer` | Seconds is the number of seconds to sleep. |

# .spec.init_containers[].lifecycle.preStop.tcpSocket

### Description

Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.init_containers[].livenessProbe

### Description

Periodic probe of container liveness. Container will be restarted if the probe fails. Cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/pods/pod-lifecycle#container-probes

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `failureThreshold` | `integer` | Minimum consecutive failures for the probe t considered failed after having succeeded. D Minimum value is 1. |
| `grpc` | `object` | GRPC specifies an action involving a GRPC |
| `httpGet` | `object` | HTTPGet specifies the http request to perfor |
| `initialDelaySeconds` | `integer` | Number of seconds after the container has s before liveness probes are initiated. More inf https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |
| `periodSeconds` | `integer` | How often (in seconds) to perform the probe 10 seconds. Minimum value is 1. |
| `successThreshold` | `integer` | Minimum consecutive successes for the prol considered successful after having failed. De Must be 1 for liveness and startup. Minimum |

| Property | Type | Description |
| --- | --- | --- |
| `tcpSocket` | `object` | TCPSocket specifies an action involving a T |
| `terminationGracePeriodSeconds` | `integer` | Optional duration in seconds the pod needs gracefully upon probe failure. The grace peri duration in seconds after the processes runr pod are sent a termination signal and the tim processes are forcibly halted with a kill signa value longer than the expected cleanup time process. If this value is nil, the pod's terminationGracePeriodSeconds will be use Otherwise, this value overrides the value pro pod spec. Value must be non-negative integ value zero indicates stop immediately via the (no opportunity to shut down). This is a beta requires enabling ProbeTerminationGracePe gate. Minimum value is 1. spec.terminationGracePeriodSeconds is use |
| `timeoutSeconds` | `integer` | Number of seconds after which the probe tin Defaults to 1 second. Minimum value is 1. M https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |

# .spec.init_containers[].livenessProbe.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.init_containers[].livenessProbe.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.init_containers[].livenessProbe.exec.command[]

### Type

`string`

## .spec.init_containers[].livenessProbe.grpc

### Description

GRPC specifies an action involving a GRPC port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `port` | `integer` | Port number of the gRPC service. Number must be in the range 1 to 65535. |
| `service` | `string` | Service is the name of the service to place in the gRPC HealthCheckRequest (see https://github.com/grpc/grpc/blob/master/doc/health-checking.md ↗). If this is not specified, the default behavior is defined by gRPC. |

## .spec.init_containers[].livenessProbe.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |

| Property | Type | Description |
| --- | --- | --- |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

# .spec.init_containers[].livenessProbe.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.init_containers[].livenessProbe.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.init_containers[].livenessProbe.tcpSocket

### Description

TCPSocket specifies an action involving a TCP port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.init_containers[].ports

### Description

List of ports to expose from the container. Not specifying a port here DOES NOT prevent that port from being exposed. Any port which is listening on the default "0.0.0.0" address inside a container will be accessible from the network. Modifying this array with strategic merge patch may corrupt the data. For more information See https://github.com/kubernetes/kubernetes/issues/108255. Cannot be updated.

### Type

`array`

## .spec.init_containers[].ports[]

### Description

ContainerPort represents a network port in a single container.

### Type

`object`

### Required

`containerPort`

| Property | Type | Description |
|---|---|---|
| `containerPort` | `integer` | Number of port to expose on the pod's IP address. This must be a valid port number, 0 < x < 65536. |
| `hostIP` | `string` | What host IP to bind the external port to. |
| `hostPort` | `integer` | Number of port to expose on the host. If specified, this must be a valid port number, 0 < x < 65536. If HostNetwork is specified, this must match ContainerPort. Most containers do not need this. |

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | If specified, this must be an IANA_SVC_NAME and unique within the pod. Each named port in a pod must have a unique name. Name for the port that can be referred to by services. |
| `protocol` | `string` | Protocol for port. Must be UDP, TCP, or SCTP. Defaults to "TCP". |

## .spec.init_containers[].readinessProbe

### Description

Periodic probe of container service readiness. Container will be removed from service endpoints if the probe fails. Cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/pods/pod-lifecycle#container-probes

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `failureThreshold` | `integer` | Minimum consecutive failures for the probe t considered failed after having succeeded. D Minimum value is 1. |
| `grpc` | `object` | GRPC specifies an action involving a GRPC |

| Property | Type | Description |
| --- | --- | --- |
| `httpGet` | `object` | HTTPGet specifies the http request to perfor |
| `initialDelaySeconds` | `integer` | Number of seconds after the container has s before liveness probes are initiated. More inf https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |
| `periodSeconds` | `integer` | How often (in seconds) to perform the probe 10 seconds. Minimum value is 1. |
| `successThreshold` | `integer` | Minimum consecutive successes for the prol considered successful after having failed. De Must be 1 for liveness and startup. Minimum |
| `tcpSocket` | `object` | TCPSocket specifies an action involving a T |
| `terminationGracePeriodSeconds` | `integer` | Optional duration in seconds the pod needs gracefully upon probe failure. The grace peri duration in seconds after the processes runr pod are sent a termination signal and the tim processes are forcibly halted with a kill signa value longer than the expected cleanup time process. If this value is nil, the pod's terminationGracePeriodSeconds will be use Otherwise, this value overrides the value pro pod spec. Value must be non-negative integ value zero indicates stop immediately via the |

| Property | Type | Description |
| --- | --- | --- |
| | | (no opportunity to shut down). This is a beta requires enabling ProbeTerminationGracePe gate. Minimum value is 1. spec.terminationGracePeriodSeconds is use |
| `timeoutSeconds` | `integer` | Number of seconds after which the probe tin Defaults to 1 second. Minimum value is 1. M https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |

# .spec.init_containers[].readinessProbe.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

# .spec.init_containers[].readinessProbe.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

**Type**

`array`

## .spec.init_containers[].readinessProbe.exec.command[]

**Type**

`string`

## .spec.init_containers[].readinessProbe.grpc

**Description**

GRPC specifies an action involving a GRPC port.

**Type**

`object`

**Required**

`port`

| Property | Type | Description |
| --- | --- | --- |
| `port` | `integer` | Port number of the gRPC service. Number must be in the range 1 to 65535. |

| Property | Type | Description |
| --- | --- | --- |
| `service` | `string` | Service is the name of the service to place in the gRPC HealthCheckRequest (see https://github.com/grpc/grpc/blob/master/doc/health-checking.md ↗). If this is not specified, the default behavior is defined by gRPC. |

# .spec.init_containers[].readinessProbe.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |

| Property | Type | Description |
| --- | --- | --- |
| `port` | | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

# .spec.init_containers[].readinessProbe.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.init_containers[].readinessProbe.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

## .spec.init_containers[].readinessProbe.tcpSocket

### Description

TCPSocket specifies an action involving a TCP port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

## .spec.init_containers[].resizePolicy

### Description

Resources resize policy for the container.

### Type

`array`

## .spec.init_containers[].resizePolicy[]

### Description

ContainerResizePolicy represents resource resize policy for the container.

### Type

`object`

### Required

`resourceName` `restartPolicy`

| Property | Type | Description |
| --- | --- | --- |
| `resourceName` | `string` | Name of the resource to which this resource resize policy applies. Supported values: cpu, memory. |
| `restartPolicy` | `string` | Restart policy to apply when specified resource is resized. If not specified, it defaults to NotRequired. |

## .spec.init_containers[].resources

### Description

Compute Resources required by this container. Cannot be updated. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `claims` | `array` | Claims lists the names of resources, defined in spec.resourceClaims, that are used by this container. This is an alpha field and requires enabling the DynamicResourceAllocation feature gate. This field is immutable. It can only be set for containers. |
| `limits` | `object` | Limits describes the maximum amount of compute resources allowed. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/ ↗ |
| `requests` | `object` | Requests describes the minimum amount of compute resources required. If Requests is omitted for a container, it defaults to Limits if that is explicitly specified, otherwise to an implementation-defined value. Requests cannot exceed Limits. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/ ↗ |

# .spec.init_containers[].resources.claims

### Description

Claims lists the names of resources, defined in spec.resourceClaims, that are used by this container. This is an alpha field and requires enabling the DynamicResourceAllocation feature gate. This field is immutable. It can only be set for containers.

### Type

`array`

# .spec.init_containers[].resources.claims[]

### Description

ResourceClaim references one entry in PodSpec.ResourceClaims.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name must match the name of one entry in pod.spec.resourceClaims of the Pod where this field is used. It makes that resource available inside a container. |

# .spec.init_containers[].resources.limits

### Description

Limits describes the maximum amount of compute resources allowed. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

# .spec.init_containers[].resources.requests

### Description

Requests describes the minimum amount of compute resources required. If Requests is omitted for a container, it defaults to Limits if that is explicitly specified, otherwise to an implementation-defined value. Requests cannot exceed Limits. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

# .spec.init_containers[].securityContext

### Description

SecurityContext defines the security options the container should be run with. If set, the fields of SecurityContext override the equivalent fields of PodSecurityContext. More info: https://kubernetes.io/docs/tasks/configure-pod-container/security-context/

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `allowPrivilegeEscalation` | `boolean` | AllowPrivilegeEscalation controls whether a process can gain more privileges than its parent process. This bool directly controls if the no_new_privs flag will be set on the container process. AllowPrivilegeEscalation is true always when the container is: 1) run as Privileged 2) has CAP_SYS_ADMIN Note that this field cannot be set when spec.os.name is windows. |
| `capabilities` | `object` | The capabilities to add/drop when running containers. Defaults to the default set of capabilities granted by the container runtime. Note that this field cannot be set when spec.os.name is windows. |
| `privileged` | `boolean` | Run container in privileged mode. Processes in privileged containers are essentially equivalent to root on the host. Defaults to |

| Property | Type | Description |
| --- | --- | --- |
| | | false. Note that this field cannot be set when spec.os.name is windows. |
| `procMount` | `string` | procMount denotes the type of proc mount to use for the containers. The default is DefaultProcMount which uses the container runtime defaults for readonly paths and masked paths. This requires the ProcMountType feature flag to be enabled. Note that this field cannot be set when spec.os.name is windows. |
| `readOnlyRootFilesystem` | `boolean` | Whether this container has a read-only root filesystem. Default is false. Note that this field cannot be set when spec.os.name is windows. |
| `runAsGroup` | `integer` | The GID to run the entrypoint of the container process. Uses runtime default if unset. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows. |
| `runAsNonRoot` | `boolean` | Indicates that the container must run as a non-root user. If true, the Kubelet will validate the image at runtime to ensure that it does not run as UID 0 (root) and fail to |

| Property | Type | Description |
| --- | --- | --- |
| | | start the container if it does. If unset or false, no such validation will be performed. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. |
| `runAsUser` | `integer` | The UID to run the entrypoint of the container process. Defaults to user specified in image metadata if unspecified. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows. |
| `seLinuxOptions` | `object` | The SELinux context to be applied to the container. If unspecified, the container runtime will allocate a random SELinux context for each container. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows. |
| `seccompProfile` | `object` | The seccomp options to use by this container. If seccomp options are provided at both the pod & container level, the container options override the pod options. Note that |

| Property | Type | Description |
| --- | --- | --- |
| | | this field cannot be set when spec.os.name is windows. |
| `windowsOptions` | `object` | The Windows specific settings applied to all containers. If unspecified, the options from the PodSecurityContext will be used. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is linux. |

## .spec.init_containers[].securityContext.capabilities

### Description

The capabilities to add/drop when running containers. Defaults to the default set of capabilities granted by the container runtime. Note that this field cannot be set when spec.os.name is windows.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `add` | `array` | Added capabilities |
| `drop` | `array` | Removed capabilities |

## .spec.init_containers[].securityContext.capabilities.add

### Description

Added capabilities

### Type

`array`

## .spec.init_containers[].securityContext.capabilities.add[]

### Description

Capability represent POSIX capabilities type

### Type

`string`

## .spec.init_containers[].securityContext.capabilities.drop

### Description

Removed capabilities

### Type

`array`

## .spec.init_containers[].securityContext.capabilities.drop[]

### Description

Capability represent POSIX capabilities type

### Type

`string`

## .spec.init_containers[].securityContext.seLinuxOptions

### Description

The SELinux context to be applied to the container. If unspecified, the container runtime will allocate a random SELinux context for each container. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value

specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `level` | `string` | Level is SELinux level label that applies to the container. |
| `role` | `string` | Role is a SELinux role label that applies to the container. |
| `type` | `string` | Type is a SELinux type label that applies to the container. |
| `user` | `string` | User is a SELinux user label that applies to the container. |

## .spec.init_containers[].securityContext.seccompProfile

**Description**

The seccomp options to use by this container. If seccomp options are provided at both the pod & container level, the container options override the pod options. Note that this field cannot be set when spec.os.name is windows.

**Type**

`object`

**Required**

`type`

| Property | Type | Description |
| --- | --- | --- |
| `localhostProfile` | `string` | localhostProfile indicates a profile defined in a file on the node should be used. The profile must be preconfigured on the node to work. Must be a descending path, relative to the kubelet's configured seccomp profile location. Must be set if type is "Localhost". Must NOT be set for any other type. |
| `type` | `string` | type indicates which kind of seccomp profile will be applied. Valid options are: Localhost - a profile defined in a file on the node should be used. RuntimeDefault - the container runtime default profile should be used. Unconfined - no profile should be applied. |

# .spec.init_containers[].securityContext.windowsOptions

### Description

The Windows specific settings applied to all containers. If unspecified, the options from the PodSecurityContext will be used. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is linux.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `gmsaCredentialSpec` | `string` | GMSACredentialSpec is where the GMSA admission webhook (https://github.com/kubernetes-sigs/windows-gmsa↗) inlines the contents of the GMSA |

| Property | Type | Description |
| --- | --- | --- |
| | | credential spec named by the GMSACredentialSpecName field. |
| `gmsaCredentialSpecName` | `string` | GMSACredentialSpecName is the name of the GMSA credential spec to use. |
| `hostProcess` | `boolean` | HostProcess determines if a container should be run as a 'Host Process' container. All of a Pod's containers must have the same effective HostProcess value (it is not allowed to have a mix of HostProcess containers and non-HostProcess containers). In addition, if HostProcess is true then HostNetwork must also be set to true. |
| `runAsUserName` | `string` | The UserName in Windows to run the entrypoint of the container process. Defaults to the user specified in image metadata if unspecified. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. |

# .spec.init_containers[].startupProbe

### Description

StartupProbe indicates that the Pod has successfully initialized. If specified, no other probes are executed until this completes successfully. If this probe fails, the Pod will be restarted,

just as if the livenessProbe failed. This can be used to provide different probe parameters at the beginning of a Pod's lifecycle, when it might take a long time to load data or warm a cache, than during steady-state operation. This cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/pods/pod-lifecycle#container-probes

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `failureThreshold` | `integer` | Minimum consecutive failures for the probe t considered failed after having succeeded. D Minimum value is 1. |
| `grpc` | `object` | GRPC specifies an action involving a GRPC |
| `httpGet` | `object` | HTTPGet specifies the http request to perfor |
| `initialDelaySeconds` | `integer` | Number of seconds after the container has s before liveness probes are initiated. More inf https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |
| `periodSeconds` | `integer` | How often (in seconds) to perform the probe 10 seconds. Minimum value is 1. |

| Property | Type | Description |
| --- | --- | --- |
| `successThreshold` | `integer` | Minimum consecutive successes for the prol considered successful after having failed. De Must be 1 for liveness and startup. Minimum |
| `tcpSocket` | `object` | TCPSocket specifies an action involving a T |
| `terminationGracePeriodSeconds` | `integer` | Optional duration in seconds the pod needs gracefully upon probe failure. The grace peri duration in seconds after the processes runr pod are sent a termination signal and the tim processes are forcibly halted with a kill signa value longer than the expected cleanup time process. If this value is nil, the pod's terminationGracePeriodSeconds will be use Otherwise, this value overrides the value pro pod spec. Value must be non-negative integ value zero indicates stop immediately via the (no opportunity to shut down). This is a beta requires enabling ProbeTerminationGracePe gate. Minimum value is 1. spec.terminationGracePeriodSeconds is use |
| `timeoutSeconds` | `integer` | Number of seconds after which the probe tin Defaults to 1 second. Minimum value is 1. M https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |

## .spec.init_containers[].startupProbe.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.init_containers[].startupProbe.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.init_containers[].startupProbe.exec.command[]

### Type

`string`

## .spec.init_containers[].startupProbe.grpc

### Description

GRPC specifies an action involving a GRPC port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `port` | `integer` | Port number of the gRPC service. Number must be in the range 1 to 65535. |
| `service` | `string` | Service is the name of the service to place in the gRPC HealthCheckRequest (see https://github.com/grpc/grpc/blob/master/doc/health-checking.md ↗). If this is not specified, the default behavior is defined by gRPC. |

## .spec.init_containers[].startupProbe.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

# .spec.init_containers[].startupProbe.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.init_containers[].startupProbe.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

## .spec.init_containers[].startupProbe.tcpSocket

### Description

TCPSocket specifies an action involving a TCP port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.init_containers[].volumeDevices

### Description

volumeDevices is the list of block devices to be used by the container.

### Type

`array`

# .spec.init_containers[].volumeDevices[]

### Description

volumeDevice describes a mapping of a raw block device within a container.

### Type

`object`

### Required

`devicePath` `name`

| Property | Type | Description |
|---|---|---|
| `devicePath` | `string` | devicePath is the path inside of the container that the device will be mapped to. |
| `name` | `string` | name must match the name of a persistentVolumeClaim in the pod |

# .spec.init_containers[].volumeMounts

### Description

Pod volumes to mount into the container's filesystem. Cannot be updated.

### Type

`array`

# .spec.init_containers[].volumeMounts[]

## Description

VolumeMount describes a mounting of a Volume within a container.

## Type

`object`

## Required

`mountPath` `name`

| Property | Type | Description |
| --- | --- | --- |
| `mountPath` | `string` | Path within the container at which the volume should be mounted. Must not contain ':'. |
| `mountPropagation` | `string` | mountPropagation determines how mounts are propagated from the host to container and the other way around. When not set, MountPropagationNone is used. This field is beta in 1.10. |
| `name` | `string` | This must match the Name of a Volume. |
| `readOnly` | `boolean` | Mounted read-only if true, read-write otherwise (false or unspecified). Defaults to false. |
| `subPath` | `string` | Path within the volume from which the container's volume should be mounted. Defaults to "" (volume's root). |

| Property | Type | Description |
| --- | --- | --- |
| `subPathExpr` | `string` | Expanded path within the volume from which the container's volume should be mounted. Behaves similarly to SubPath but environment variable references $(VAR_NAME) are expanded using the container's environment. Defaults to "" (volume's root). SubPathExpr and SubPath are mutually exclusive. |

# .spec.initContainers

### Description

InitContainers defines initialization containers for the pod

### Type

`array`

# .spec.initContainers[]

### Description

A single application container that you want to run within a pod.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `args` | `array` | Arguments to the entrypoint. The container image' if this is not provided. Variable references $(VAR_I expanded using the container's environment. If a v be resolved, the reference in the input string will b |

| Property | Type | Description |
| --- | --- | --- |
| | | Double $$ are reduced to a single $, which allows the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" w string literal "$(VAR_NAME)". Escaped references expanded, regardless of whether the variable exist Cannot be updated. More info: https://kubernetes.io/docs/tasks/inject-data-applica command-argument-container/#running-a-comma |
| `command` | `array` | Entrypoint array. Not executed within a shell. The image's ENTRYPOINT is used if this is not provide references $(VAR_NAME) are expanded using the environment. If a variable cannot be resolved, the the input string will be unchanged. Double $$ are r single $, which allows for escaping the $(VAR_NA i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never b regardless of whether the variable exists or not. Ca updated. More info: https://kubernetes.io/docs/task application/define-command-argument-container/# command-in-a-shell ↗ |
| `env` | `array` | List of environment variables to set in the containe updated. |

| Property | Type | Description |
| --- | --- | --- |
| `envFrom` | `array` | List of sources to populate environment variables i container. The keys defined within a source must b C_IDENTIFIER. All invalid keys will be reported as when the container is starting. When a key exists i sources, the value associated with the last source precedence. Values defined by an Env with a dupl take precedence. Cannot be updated. |
| `image` | `string` | Container image name. More info: https://kubernetes.io/docs/concepts/containers/ima field is optional to allow higher level config manage default or override container images in workload c Deployments and StatefulSets. |
| `imagePullPolicy` | `string` | Image pull policy. One of Always, Never, IfNotPres to Always if :latest tag is specified, or IfNotPresent Cannot be updated. More info: https://kubernetes.io/docs/concepts/containers/ima images ↗ |
| `lifecycle` | `object` | Actions that the management system should take container lifecycle events. Cannot be updated. |
| `livenessProbe` | `object` | Periodic probe of container liveness. Container wil the probe fails. Cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/poc lifecycle#container-probes ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the container specified as a DNS_LABEL container in a pod must have a unique name (DNS Cannot be updated. |
| `ports` | `array` | List of ports to expose from the container. Not spe here DOES NOT prevent that port from being expo which is listening on the default "0.0.0.0" address i container will be accessible from the network. Moc array with strategic merge patch may corrupt the d information See https://github.com/kubernetes/kubernetes/issues/1 Cannot be updated. |
| `readinessProbe` | `object` | Periodic probe of container service readiness. Cor removed from service endpoints if the probe fails. updated. More info: https://kubernetes.io/docs/concepts/workloads/poc lifecycle#container-probes ↗ |
| `resizePolicy` | `array` | Resources resize policy for the container. |
| `resources` | `object` | Compute Resources required by this container. Ca updated. More info: https://kubernetes.io/docs/concepts/configuration/r resources-containers/ ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `restartPolicy` | `string` | RestartPolicy defines the restart behavior of indivi in a pod. This field may only be set for init containe only allowed value is "Always". For non-init contair this field is not specified, the restart behavior is de Pod's restart policy and the container type. Setting RestartPolicy as "Always" for the init container will following effect: this init container will be continuall exit until all regular containers have terminated. O containers have completed, all init containers with "Always" will be shut down. This lifecycle differs fr containers and is often referred to as a "sidecar" c Although this init container still starts in the init cor sequence, it does not wait for the container to com proceeding to the next init container. Instead, the r container starts immediately after this init containe after any startupProbe has successfully completec |
| `securityContext` | `object` | SecurityContext defines the security options the c be run with. If set, the fields of SecurityContext ov equivalent fields of PodSecurityContext. More info https://kubernetes.io/docs/tasks/configure-pod-container/security-context/ ↗ |
| `startupProbe` | `object` | StartupProbe indicates that the Pod has successfu If specified, no other probes are executed until this successfully. If this probe fails, the Pod will be rest the livenessProbe failed. This can be used to prov probe parameters at the beginning of a Pod's lifec might take a long time to load data or warm a cach steady-state operation. This cannot be updated. M |

| Property | Type | Description |
| --- | --- | --- |
| | | https://kubernetes.io/docs/concepts/workloads/poc lifecycle#container-probes ↗ |
| `stdin` | `boolean` | Whether this container should allocate a buffer for container runtime. If this is not set, reads from stdi container will always result in EOF. Default is false |
| `stdinOnce` | `boolean` | Whether the container runtime should close the st after it has been opened by a single attach. When the stdin stream will remain open across multiple a sessions. If stdinOnce is set to true, stdin is opene start, is empty until the first client attaches to stdin remains open and accepts data until the client disc which time stdin is closed and remains closed unti is restarted. If this flag is false, a container process from stdin will never receive an EOF. Default is fal |
| `terminationMessagePath` | `string` | Optional: Path at which the file to which the contai termination message will be written is mounted int container's filesystem. Message written is intended final status, such as an assertion failure message. truncated by the node if greater than 4096 bytes. T message length across all containers will be limite Defaults to /dev/termination-log. Cannot be update |
| `terminationMessagePolicy` | `string` | Indicate how the termination message should be p will use the contents of terminationMessagePath t container status message on both success and fai FallbackToLogsOnError will use the last chunk of c output if the termination message file is empty and |

| Property | Type | Description |
| --- | --- | --- |
| | | exited with an error. The log output is limited to 20 lines, whichever is smaller. Defaults to File. Canno |
| `tty` | `boolean` | Whether this container should allocate a TTY for it requires 'stdin' to be true. Default is false. |
| `volumeDevices` | `array` | volumeDevices is the list of block devices to be us container. |
| `volumeMounts` | `array` | Pod volumes to mount into the container's filesyste updated. |
| `workingDir` | `string` | Container's working directory. If not specified, the runtime's default will be used, which might be conf container image. Cannot be updated. |

# .spec.initContainers[].args

### Description

Arguments to the entrypoint. The container image's CMD is used if this is not provided. Variable references $(VAR_NAME) are expanded using the container's environment. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Cannot be updated. More info: https://kubernetes.io/docs/tasks/inject-data-application/define-command-argument-container/#running-a-command-in-a-shell

### Type

`array`

## .spec.initContainers[].args[]

### Type

`string`

## .spec.initContainers[].command

### Description

Entrypoint array. Not executed within a shell. The container image's ENTRYPOINT is used if this is not provided. Variable references $(VAR_NAME) are expanded using the container's environment. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Cannot be updated. More info: https://kubernetes.io/docs/tasks/inject-data-application/define-command-argument-container/#running-a-command-in-a-shell

### Type

`array`

## .spec.initContainers[].command[]

### Type

`string`

## .spec.initContainers[].env

### Description

List of environment variables to set in the container. Cannot be updated.

### Type

`array`

# .spec.initContainers[].env[]

### Description

EnvVar represents an environment variable present in a Container.

### Type

`object`

### Required

`name`

| Property | Type | Description |
|---|---|---|
| `name` | `string` | Name of the environment variable. Must be a C_IDENTIFIER. |
| `value` | `string` | Variable references $(VAR_NAME) are expanded using the previously defined environment variables in the container and any service environment variables. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Defaults to "". |
| `valueFrom` | `object` | Source for the environment variable's value. Cannot be used if value is not empty. |

# .spec.initContainers[].env[].valueFrom

### Description

Source for the environment variable's value. Cannot be used if value is not empty.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapKeyRef` | `object` | Selects a key of a ConfigMap. |
| `fieldRef` | `object` | Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs. |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported. |
| `secretKeyRef` | `object` | Selects a key of a secret in the pod's namespace |

## .spec.initContainers[].env[].valueFrom.configMapKeyRef

### Description

Selects a key of a ConfigMap.

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key to select. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the ConfigMap or its key must be defined |

# .spec.initContainers[].env[].valueFrom.fieldRef

### Description

Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |

| Property | Type | Description |
| --- | --- | --- |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

# .spec.initContainers[].env[].valueFrom.resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

# .spec.initContainers[].env[].valueFrom.secretKeyRef

### Description

Selects a key of a secret in the pod's namespace

**Type**

`object`

**Required**

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key of the secret to select from. Must be a valid secret key. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the Secret or its key must be defined |

# .spec.initContainers[].envFrom

**Description**

List of sources to populate environment variables in the container. The keys defined within a source must be a C_IDENTIFIER. All invalid keys will be reported as an event when the container is starting. When a key exists in multiple sources, the value associated with the last source will take precedence. Values defined by an Env with a duplicate key will take precedence. Cannot be updated.

**Type**

`array`

# .spec.initContainers[].envFrom[]

### Description

EnvFromSource represents the source of a set of ConfigMaps

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapRef` | `object` | The ConfigMap to select from |
| `prefix` | `string` | An optional identifier to prepend to each key in the ConfigMap. Must be a C_IDENTIFIER. |
| `secretRef` | `object` | The Secret to select from |

## .spec.initContainers[].envFrom[].configMapRef

### Description

The ConfigMap to select from

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |

| Property | Type | Description |
| --- | --- | --- |
| `optional` | `boolean` | Specify whether the ConfigMap must be defined |

# .spec.initContainers[].envFrom[].secretRef

### Description

The Secret to select from

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the Secret must be defined |

# .spec.initContainers[].lifecycle

### Description

Actions that the management system should take in response to container lifecycle events. Cannot be updated.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `postStart` | `object` | PostStart is called immediately after a container is created. If the handler fails, the container is terminated and restarted according to its restart policy. Other management of the container blocks until the hook completes. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks ↗ |
| `preStop` | `object` | PreStop is called immediately before a container is terminated due to an API request or management event such as liveness/startup probe failure, preemption, resource contention, etc. The handler is not called if the container crashes or exits. The Pod's termination grace period countdown begins before the PreStop hook is executed. Regardless of the outcome of the handler, the container will eventually terminate within the Pod's termination grace period (unless delayed by finalizers). Other management of the container blocks until the hook completes or until the termination grace period is reached. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks ↗ |

# .spec.initContainers[].lifecycle.postStart

### Description

PostStart is called immediately after a container is created. If the handler fails, the container is terminated and restarted according to its restart policy. Other management of the container blocks until the hook completes. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `httpGet` | `object` | HTTPGet specifies the http request to perform. |
| `sleep` | `object` | Sleep represents the duration that the container should sleep before being terminated. |
| `tcpSocket` | `object` | Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified. |

# .spec.initContainers[].lifecycle.postStart.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.initContainers[].lifecycle.postStart.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.initContainers[].lifecycle.postStart.exec.command[]

### Type

`string`

## .spec.initContainers[].lifecycle.postStart.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

## .spec.initContainers[].lifecycle.postStart.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.initContainers[].lifecycle.postStart.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.initContainers[].lifecycle.postStart.sleep

### Description

Sleep represents the duration that the container should sleep before being terminated.

### Type

`object`

### Required

`seconds`

| Property | Type | Description |
| --- | --- | --- |
| `seconds` | `integer` | Seconds is the number of seconds to sleep. |

# .spec.initContainers[].lifecycle.postStart.tcpSocket

### Description

Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.initContainers[].lifecycle.preStop

### Description

PreStop is called immediately before a container is terminated due to an API request or management event such as liveness/startup probe failure, preemption, resource contention, etc. The handler is not called if the container crashes or exits. The Pod's termination grace

period countdown begins before the PreStop hook is executed. Regardless of the outcome of the handler, the container will eventually terminate within the Pod's termination grace period (unless delayed by finalizers). Other management of the container blocks until the hook completes or until the termination grace period is reached. More info: https://kubernetes.io/docs/concepts/containers/container-lifecycle-hooks/#container-hooks

**Type**

`object`

| Property | Type | Description |
|---|---|---|
| `exec` | `object` | Exec specifies the action to take. |
| `httpGet` | `object` | HTTPGet specifies the http request to perform. |
| `sleep` | `object` | Sleep represents the duration that the container should sleep before being terminated. |
| `tcpSocket` | `object` | Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified. |

## .spec.initContainers[].lifecycle.preStop.exec

**Description**

Exec specifies the action to take.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.initContainers[].lifecycle.preStop.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.initContainers[].lifecycle.preStop.exec.command[]

### Type

`string`

## .spec.initContainers[].lifecycle.preStop.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

## .spec.initContainers[].lifecycle.preStop.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.initContainers[].lifecycle.preStop.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.initContainers[].lifecycle.preStop.sleep

### Description

Sleep represents the duration that the container should sleep before being terminated.

### Type

`object`

### Required

`seconds`

| Property | Type | Description |
| --- | --- | --- |
| `seconds` | `integer` | Seconds is the number of seconds to sleep. |

# .spec.initContainers[].lifecycle.preStop.tcpSocket

### Description

Deprecated. TCPSocket is NOT supported as a LifecycleHandler and kept for the backward compatibility. There are no validation of this field and lifecycle hooks will fail in runtime when tcp handler is specified.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.initContainers[].livenessProbe

### Description

Periodic probe of container liveness. Container will be restarted if the probe fails. Cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/pods/pod-lifecycle#container-probes

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `failureThreshold` | `integer` | Minimum consecutive failures for the probe t considered failed after having succeeded. D Minimum value is 1. |
| `grpc` | `object` | GRPC specifies an action involving a GRPC |
| `httpGet` | `object` | HTTPGet specifies the http request to perfor |
| `initialDelaySeconds` | `integer` | Number of seconds after the container has s before liveness probes are initiated. More inf https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |
| `periodSeconds` | `integer` | How often (in seconds) to perform the probe 10 seconds. Minimum value is 1. |
| `successThreshold` | `integer` | Minimum consecutive successes for the prol considered successful after having failed. De Must be 1 for liveness and startup. Minimum |

| Property | Type | Description |
| --- | --- | --- |
| `tcpSocket` | `object` | TCPSocket specifies an action involving a T |
| `terminationGracePeriodSeconds` | `integer` | Optional duration in seconds the pod needs gracefully upon probe failure. The grace peri duration in seconds after the processes runr pod are sent a termination signal and the tim processes are forcibly halted with a kill signa value longer than the expected cleanup time process. If this value is nil, the pod's terminationGracePeriodSeconds will be use Otherwise, this value overrides the value pro pod spec. Value must be non-negative integ value zero indicates stop immediately via the (no opportunity to shut down). This is a beta requires enabling ProbeTerminationGracePe gate. Minimum value is 1. spec.terminationGracePeriodSeconds is use |
| `timeoutSeconds` | `integer` | Number of seconds after which the probe tin Defaults to 1 second. Minimum value is 1. M https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |

# .spec.initContainers[].livenessProbe.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.initContainers[].livenessProbe.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.initContainers[].livenessProbe.exec.command[]

### Type

`string`

## .spec.initContainers[].livenessProbe.grpc

### Description

GRPC specifies an action involving a GRPC port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `port` | `integer` | Port number of the gRPC service. Number must be in the range 1 to 65535. |
| `service` | `string` | Service is the name of the service to place in the gRPC HealthCheckRequest (see https://github.com/grpc/grpc/blob/master/doc/health-checking.md ↗). If this is not specified, the default behavior is defined by gRPC. |

## .spec.initContainers[].livenessProbe.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |

| Property | Type | Description |
| --- | --- | --- |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

# .spec.initContainers[].livenessProbe.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.initContainers[].livenessProbe.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.initContainers[].livenessProbe.tcpSocket

### Description

TCPSocket specifies an action involving a TCP port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.initContainers[].ports

### Description

List of ports to expose from the container. Not specifying a port here DOES NOT prevent that port from being exposed. Any port which is listening on the default "0.0.0.0" address inside a container will be accessible from the network. Modifying this array with strategic merge patch may corrupt the data. For more information See https://github.com/kubernetes/kubernetes/issues/108255. Cannot be updated.

### Type

`array`

## .spec.initContainers[].ports[]

### Description

ContainerPort represents a network port in a single container.

### Type

`object`

### Required

`containerPort`

| Property | Type | Description |
|---|---|---|
| `containerPort` | `integer` | Number of port to expose on the pod's IP address. This must be a valid port number, 0 < x < 65536. |
| `hostIP` | `string` | What host IP to bind the external port to. |
| `hostPort` | `integer` | Number of port to expose on the host. If specified, this must be a valid port number, 0 < x < 65536. If HostNetwork is specified, this must match ContainerPort. Most containers do not need this. |

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | If specified, this must be an IANA_SVC_NAME and unique within the pod. Each named port in a pod must have a unique name. Name for the port that can be referred to by services. |
| `protocol` | `string` | Protocol for port. Must be UDP, TCP, or SCTP. Defaults to "TCP". |

# .spec.initContainers[].readinessProbe

### Description

Periodic probe of container service readiness. Container will be removed from service endpoints if the probe fails. Cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/pods/pod-lifecycle#container-probes

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `failureThreshold` | `integer` | Minimum consecutive failures for the probe t considered failed after having succeeded. D Minimum value is 1. |
| `grpc` | `object` | GRPC specifies an action involving a GRPC |

| Property | Type | Description |
| --- | --- | --- |
| `httpGet` | `object` | HTTPGet specifies the http request to perfor |
| `initialDelaySeconds` | `integer` | Number of seconds after the container has s before liveness probes are initiated. More inf https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |
| `periodSeconds` | `integer` | How often (in seconds) to perform the probe 10 seconds. Minimum value is 1. |
| `successThreshold` | `integer` | Minimum consecutive successes for the prol considered successful after having failed. De Must be 1 for liveness and startup. Minimum |
| `tcpSocket` | `object` | TCPSocket specifies an action involving a T |
| `terminationGracePeriodSeconds` | `integer` | Optional duration in seconds the pod needs gracefully upon probe failure. The grace peri duration in seconds after the processes runr pod are sent a termination signal and the tim processes are forcibly halted with a kill signa value longer than the expected cleanup time process. If this value is nil, the pod's terminationGracePeriodSeconds will be use Otherwise, this value overrides the value pro pod spec. Value must be non-negative integ value zero indicates stop immediately via the |

| Property | Type | Description |
| --- | --- | --- |
| | | (no opportunity to shut down). This is a beta requires enabling ProbeTerminationGracePe gate. Minimum value is 1. spec.terminationGracePeriodSeconds is use |
| `timeoutSeconds` | `integer` | Number of seconds after which the probe tin Defaults to 1 second. Minimum value is 1. M https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |

# .spec.initContainers[].readinessProbe.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

# .spec.initContainers[].readinessProbe.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

**Type**

`array`

## .spec.initContainers[].readinessProbe.exec.command[]

**Type**

`string`

## .spec.initContainers[].readinessProbe.grpc

**Description**

GRPC specifies an action involving a GRPC port.

**Type**

`object`

**Required**

`port`

| Property | Type | Description |
| --- | --- | --- |
| `port` | `integer` | Port number of the gRPC service. Number must be in the range 1 to 65535. |

| Property | Type | Description |
| --- | --- | --- |
| `service` | `string` | Service is the name of the service to place in the gRPC HealthCheckRequest (see https://github.com/grpc/grpc/blob/master/doc/health-checking.md ↗). If this is not specified, the default behavior is defined by gRPC. |

# .spec.initContainers[].readinessProbe.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |

| Property | Type | Description |
| --- | --- | --- |
| `port` | | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

# .spec.initContainers[].readinessProbe.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.initContainers[].readinessProbe.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

# .spec.initContainers[].readinessProbe.tcpSocket

### Description

TCPSocket specifies an action involving a TCP port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.initContainers[].resizePolicy

### Description

Resources resize policy for the container.

### Type

`array`

## .spec.initContainers[].resizePolicy[]

### Description

ContainerResizePolicy represents resource resize policy for the container.

### Type

`object`

### Required

`resourceName` `restartPolicy`

| Property | Type | Description |
| --- | --- | --- |
| `resourceName` | `string` | Name of the resource to which this resource resize policy applies. Supported values: cpu, memory. |
| `restartPolicy` | `string` | Restart policy to apply when specified resource is resized. If not specified, it defaults to NotRequired. |

## .spec.initContainers[].resources

### Description

Compute Resources required by this container. Cannot be updated. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `claims` | `array` | Claims lists the names of resources, defined in spec.resourceClaims, that are used by this container. This is an alpha field and requires enabling the DynamicResourceAllocation feature gate. This field is immutable. It can only be set for containers. |
| `limits` | `object` | Limits describes the maximum amount of compute resources allowed. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/ ↗ |
| `requests` | `object` | Requests describes the minimum amount of compute resources required. If Requests is omitted for a container, it defaults to Limits if that is explicitly specified, otherwise to an implementation-defined value. Requests cannot exceed Limits. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/ ↗ |

# .spec.initContainers[].resources.claims

### Description

Claims lists the names of resources, defined in spec.resourceClaims, that are used by this container. This is an alpha field and requires enabling the DynamicResourceAllocation feature gate. This field is immutable. It can only be set for containers.

### Type

`array`

# .spec.initContainers[].resources.claims[]

### Description

ResourceClaim references one entry in PodSpec.ResourceClaims.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name must match the name of one entry in pod.spec.resourceClaims of the Pod where this field is used. It makes that resource available inside a container. |

# .spec.initContainers[].resources.limits

### Description

Limits describes the maximum amount of compute resources allowed. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

# .spec.initContainers[].resources.requests

### Description

Requests describes the minimum amount of compute resources required. If Requests is omitted for a container, it defaults to Limits if that is explicitly specified, otherwise to an implementation-defined value. Requests cannot exceed Limits. More info: https://kubernetes.io/docs/concepts/configuration/manage-resources-containers/

### Type

`object`

# .spec.initContainers[].securityContext

### Description

SecurityContext defines the security options the container should be run with. If set, the fields of SecurityContext override the equivalent fields of PodSecurityContext. More info: https://kubernetes.io/docs/tasks/configure-pod-container/security-context/

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `allowPrivilegeEscalation` | `boolean` | AllowPrivilegeEscalation controls whether a process can gain more privileges than its parent process. This bool directly controls if the no_new_privs flag will be set on the container process. AllowPrivilegeEscalation is true always when the container is: 1) run as Privileged 2) has CAP_SYS_ADMIN Note that this field cannot be set when spec.os.name is windows. |
| `capabilities` | `object` | The capabilities to add/drop when running containers. Defaults to the default set of capabilities granted by the container runtime. Note that this field cannot be set when spec.os.name is windows. |
| `privileged` | `boolean` | Run container in privileged mode. Processes in privileged containers are essentially equivalent to root on the host. Defaults to |

| Property | Type | Description |
| --- | --- | --- |
| | | false. Note that this field cannot be set when spec.os.name is windows. |
| `procMount` | `string` | procMount denotes the type of proc mount to use for the containers. The default is DefaultProcMount which uses the container runtime defaults for readonly paths and masked paths. This requires the ProcMountType feature flag to be enabled. Note that this field cannot be set when spec.os.name is windows. |
| `readOnlyRootFilesystem` | `boolean` | Whether this container has a read-only root filesystem. Default is false. Note that this field cannot be set when spec.os.name is windows. |
| `runAsGroup` | `integer` | The GID to run the entrypoint of the container process. Uses runtime default if unset. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows. |
| `runAsNonRoot` | `boolean` | Indicates that the container must run as a non-root user. If true, the Kubelet will validate the image at runtime to ensure that it does not run as UID 0 (root) and fail to |

| Property | Type | Description |
| --- | --- | --- |
| | | start the container if it does. If unset or false, no such validation will be performed. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. |
| `runAsUser` | `integer` | The UID to run the entrypoint of the container process. Defaults to user specified in image metadata if unspecified. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows. |
| `seLinuxOptions` | `object` | The SELinux context to be applied to the container. If unspecified, the container runtime will allocate a random SELinux context for each container. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows. |
| `seccompProfile` | `object` | The seccomp options to use by this container. If seccomp options are provided at both the pod & container level, the container options override the pod options. Note that |

| Property | Type | Description |
| --- | --- | --- |
| | | this field cannot be set when spec.os.name is windows. |
| `windowsOptions` | `object` | The Windows specific settings applied to all containers. If unspecified, the options from the PodSecurityContext will be used. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is linux. |

## .spec.initContainers[].securityContext.capabilities

### Description

The capabilities to add/drop when running containers. Defaults to the default set of capabilities granted by the container runtime. Note that this field cannot be set when spec.os.name is windows.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `add` | `array` | Added capabilities |
| `drop` | `array` | Removed capabilities |

## .spec.initContainers[].securityContext.capabilities.add

### Description

Added capabilities

### Type

`array`

## .spec.initContainers[].securityContext.capabilities.add[]

### Description

Capability represent POSIX capabilities type

### Type

`string`

## .spec.initContainers[].securityContext.capabilities.drop

### Description

Removed capabilities

### Type

`array`

## .spec.initContainers[].securityContext.capabilities.drop[]

### Description

Capability represent POSIX capabilities type

### Type

`string`

## .spec.initContainers[].securityContext.seLinuxOptions

### Description

The SELinux context to be applied to the container. If unspecified, the container runtime will allocate a random SELinux context for each container. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value

specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is windows.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `level` | `string` | Level is SELinux level label that applies to the container. |
| `role` | `string` | Role is a SELinux role label that applies to the container. |
| `type` | `string` | Type is a SELinux type label that applies to the container. |
| `user` | `string` | User is a SELinux user label that applies to the container. |

## .spec.initContainers[].securityContext.seccompProfile

**Description**

The seccomp options to use by this container. If seccomp options are provided at both the pod & container level, the container options override the pod options. Note that this field cannot be set when spec.os.name is windows.

**Type**

`object`

**Required**

`type`

| Property | Type | Description |
| --- | --- | --- |
| `localhostProfile` | `string` | localhostProfile indicates a profile defined in a file on the node should be used. The profile must be preconfigured on the node to work. Must be a descending path, relative to the kubelet's configured seccomp profile location. Must be set if type is "Localhost". Must NOT be set for any other type. |
| `type` | `string` | type indicates which kind of seccomp profile will be applied. Valid options are: Localhost - a profile defined in a file on the node should be used. RuntimeDefault - the container runtime default profile should be used. Unconfined - no profile should be applied. |

# .spec.initContainers[].securityContext.windowsOptions

### Description

The Windows specific settings applied to all containers. If unspecified, the options from the PodSecurityContext will be used. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. Note that this field cannot be set when spec.os.name is linux.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `gmsaCredentialSpec` | `string` | GMSACredentialSpec is where the GMSA admission webhook (https://github.com/kubernetes-sigs/windows-gmsa↗) inlines the contents of the GMSA |

| Property | Type | Description |
| --- | --- | --- |
| | | credential spec named by the GMSACredentialSpecName field. |
| `gmsaCredentialSpecName` | `string` | GMSACredentialSpecName is the name of the GMSA credential spec to use. |
| `hostProcess` | `boolean` | HostProcess determines if a container should be run as a 'Host Process' container. All of a Pod's containers must have the same effective HostProcess value (it is not allowed to have a mix of HostProcess containers and non-HostProcess containers). In addition, if HostProcess is true then HostNetwork must also be set to true. |
| `runAsUserName` | `string` | The UserName in Windows to run the entrypoint of the container process. Defaults to the user specified in image metadata if unspecified. May also be set in PodSecurityContext. If set in both SecurityContext and PodSecurityContext, the value specified in SecurityContext takes precedence. |

# .spec.initContainers[].startupProbe

### Description

StartupProbe indicates that the Pod has successfully initialized. If specified, no other probes are executed until this completes successfully. If this probe fails, the Pod will be restarted,

just as if the livenessProbe failed. This can be used to provide different probe parameters at the beginning of a Pod's lifecycle, when it might take a long time to load data or warm a cache, than during steady-state operation. This cannot be updated. More info: https://kubernetes.io/docs/concepts/workloads/pods/pod-lifecycle#container-probes

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `exec` | `object` | Exec specifies the action to take. |
| `failureThreshold` | `integer` | Minimum consecutive failures for the probe t considered failed after having succeeded. D Minimum value is 1. |
| `grpc` | `object` | GRPC specifies an action involving a GRPC |
| `httpGet` | `object` | HTTPGet specifies the http request to perfor |
| `initialDelaySeconds` | `integer` | Number of seconds after the container has s before liveness probes are initiated. More inf https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |
| `periodSeconds` | `integer` | How often (in seconds) to perform the probe 10 seconds. Minimum value is 1. |

| Property | Type | Description |
| --- | --- | --- |
| `successThreshold` | `integer` | Minimum consecutive successes for the prol considered successful after having failed. De Must be 1 for liveness and startup. Minimum |
| `tcpSocket` | `object` | TCPSocket specifies an action involving a T |
| `terminationGracePeriodSeconds` | `integer` | Optional duration in seconds the pod needs gracefully upon probe failure. The grace peri duration in seconds after the processes runr pod are sent a termination signal and the tim processes are forcibly halted with a kill signa value longer than the expected cleanup time process. If this value is nil, the pod's terminationGracePeriodSeconds will be use Otherwise, this value overrides the value pro pod spec. Value must be non-negative integ value zero indicates stop immediately via the (no opportunity to shut down). This is a beta requires enabling ProbeTerminationGracePe gate. Minimum value is 1. spec.terminationGracePeriodSeconds is use |
| `timeoutSeconds` | `integer` | Number of seconds after which the probe tin Defaults to 1 second. Minimum value is 1. M https://kubernetes.io/docs/concepts/workloa lifecycle#container-probes ↗ |

## .spec.initContainers[].startupProbe.exec

### Description

Exec specifies the action to take.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `command` | `array` | Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('\|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy. |

## .spec.initContainers[].startupProbe.exec.command

### Description

Command is the command line to execute inside the container, the working directory for the command is root ('/') in the container's filesystem. The command is simply exec'd, it is not run inside a shell, so traditional shell instructions ('|', etc) won't work. To use a shell, you need to explicitly call out to that shell. Exit status of 0 is treated as live/healthy and non-zero is unhealthy.

### Type

`array`

## .spec.initContainers[].startupProbe.exec.command[]

### Type

`string`

## .spec.initContainers[].startupProbe.grpc

### Description

GRPC specifies an action involving a GRPC port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `port` | `integer` | Port number of the gRPC service. Number must be in the range 1 to 65535. |
| `service` | `string` | Service is the name of the service to place in the gRPC HealthCheckRequest (see https://github.com/grpc/grpc/blob/master/doc/health-checking.md ↗). If this is not specified, the default behavior is defined by gRPC. |

## .spec.initContainers[].startupProbe.httpGet

### Description

HTTPGet specifies the http request to perform.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Host name to connect to, defaults to the pod IP. You probably want to set "Host" in httpHeaders instead. |
| `httpHeaders` | `array` | Custom headers to set in the request. HTTP allows repeated headers. |
| `path` | `string` | Path to access on the HTTP server. |
| `port` |  | Name or number of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |
| `scheme` | `string` | Scheme to use for connecting to the host. Defaults to HTTP. |

# .spec.initContainers[].startupProbe.httpGet.httpHeaders

### Description

Custom headers to set in the request. HTTP allows repeated headers.

### Type

`array`

# .spec.initContainers[].startupProbe.httpGet.httpHeaders[]

### Description

HTTPHeader describes a custom header to be used in HTTP probes

### Type

`object`

### Required

`name` `value`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | The header field name. This will be canonicalized upon output, so case-variant names will be understood as the same header. |
| `value` | `string` | The header field value |

## .spec.initContainers[].startupProbe.tcpSocket

### Description

TCPSocket specifies an action involving a TCP port.

### Type

`object`

### Required

`port`

| Property | Type | Description |
| --- | --- | --- |
| `host` | `string` | Optional: Host name to connect to, defaults to the pod IP. |
| `port` | | Number or name of the port to access on the container. Number must be in the range 1 to 65535. Name must be an IANA_SVC_NAME. |

# .spec.initContainers[].volumeDevices

### Description

volumeDevices is the list of block devices to be used by the container.

### Type

`array`

# .spec.initContainers[].volumeDevices[]

### Description

volumeDevice describes a mapping of a raw block device within a container.

### Type

`object`

### Required

`devicePath` `name`

| Property | Type | Description |
|---|---|---|
| `devicePath` | `string` | devicePath is the path inside of the container that the device will be mapped to. |
| `name` | `string` | name must match the name of a persistentVolumeClaim in the pod |

# .spec.initContainers[].volumeMounts

### Description

Pod volumes to mount into the container's filesystem. Cannot be updated.

### Type

`array`

# .spec.initContainers[].volumeMounts[]

## Description

VolumeMount describes a mounting of a Volume within a container.

## Type

`object`

## Required

`mountPath` `name`

| Property | Type | Description |
|---|---|---|
| `mountPath` | `string` | Path within the container at which the volume should be mounted. Must not contain ':'. |
| `mountPropagation` | `string` | mountPropagation determines how mounts are propagated from the host to container and the other way around. When not set, MountPropagationNone is used. This field is beta in 1.10. |
| `name` | `string` | This must match the Name of a Volume. |
| `readOnly` | `boolean` | Mounted read-only if true, read-write otherwise (false or unspecified). Defaults to false. |
| `subPath` | `string` | Path within the volume from which the container's volume should be mounted. Defaults to "" (volume's root). |

| Property | Type | Description |
| --- | --- | --- |
| `subPathExpr` | `string` | Expanded path within the volume from which the container's volume should be mounted. Behaves similarly to SubPath but environment variable references $(VAR_NAME) are expanded using the container's environment. Defaults to "" (volume's root). SubPathExpr and SubPath are mutually exclusive. |

# .spec.maintenanceWindows

### Description

MaintenanceWindows defines time windows for maintenance operations

### Type

`array`

# .spec.maintenanceWindows[]

### Description

MaintenanceWindow describes the time window when the operator is allowed to do maintenance on a cluster.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `endTime` | `string` | EndTime defines the end of the maintenance window in HH:MM format |

| Property | Type | Description |
| --- | --- | --- |
| `everyday` | `boolean` | Everyday enables maintenance every day of the week |
| `startTime` | `string` | StartTime defines the beginning of the maintenance window in HH:MM format |

# .spec.masterServiceAnnotations

### Description

MasterServiceAnnotations defines annotations for master service

### Type

`object`

# .spec.nodeAffinity

### Description

NodeAffinity defines node affinity rules for pod scheduling

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `preferredDuringSchedulingIgnoredDuringExecution` | `array` | The scheduler will prefe to schedule pods to nodes that satisfy the affinity expressions specified by this field, bu it may choose a node th violates one or more of |

| Property | Type | Description |
| --- | --- | --- |
| | | the expressions. The node that is most preferred is the one with the greatest sum of weights, i.e. for each node that meets all of th scheduling requirements (resource request, requiredDuringScheduli affinity expressions, etc. compute a sum by iterating through the elements of this field an adding "weight" to the sum if the node matches the corresponding matchExpressions; the node(s) with the highest sum are the most preferred. |
| `requiredDuringSchedulingIgnoredDuringExecution` | `object` | If the affinity requiremen specified by this field are not met at scheduling time, the pod will not be scheduled onto the node If the affinity requiremen specified by this field cease to be met at some point during pod execution (e.g. due to a update), the system may or may not try to |

| Property | Type | Description |
| --- | --- | --- |
| | | eventually evict the pod from its node. |

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution

### Description

The scheduler will prefer to schedule pods to nodes that satisfy the affinity expressions specified by this field, but it may choose a node that violates one or more of the expressions. The node that is most preferred is the one with the greatest sum of weights, i.e. for each node that meets all of the scheduling requirements (resource request, requiredDuringScheduling affinity expressions, etc.), compute a sum by iterating through the elements of this field and adding "weight" to the sum if the node matches the corresponding matchExpressions; the node(s) with the highest sum are the most preferred.

### Type

`array`

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[]

### Description

An empty preferred scheduling term matches all objects with implicit weight 0 (i.e. it's a no-op). A null preferred scheduling term matches no objects (i.e. is also a no-op).

### Type

`object`

### Required

`preference` `weight`

| Property | Type | Description |
| --- | --- | --- |
| `preference` | `object` | A node selector term, associated with the corresponding weight. |
| `weight` | `integer` | Weight associated with matching the corresponding nodeSelectorTerm, in the range 1-100. |

## .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference

### Description

A node selector term, associated with the corresponding weight.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `matchExpressions` | `array` | A list of node selector requirements by node's labels. |
| `matchFields` | `array` | A list of node selector requirements by node's fields. |

## .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchExpressions

### Description

A list of node selector requirements by node's labels.

### Type

`array`

## .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchExpressions[]

### Description

A node selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

### Type

`object`

### Required

`key` `operator`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The label key that the selector applies to. |
| `operator` | `string` | Represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists, DoesNotExist. Gt, and Lt. |
| `values` | `array` | An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch. |

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchExpressions[].values

### Description

An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch.

### Type

`array`

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchExpressions[].values[]

### Type

`string`

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchFields

### Description

A list of node selector requirements by node's fields.

### Type

`array`

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchFields[]

### Description

A node selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

### Type

`object`

### Required

`key` `operator`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The label key that the selector applies to. |
| `operator` | `string` | Represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists, DoesNotExist. Gt, and Lt. |
| `values` | `array` | An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch. |

## .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchFields[].values

### Description

An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch.

### Type

`array`

# .spec.nodeAffinity.preferredDuringSchedulingIgnoredDuringExecution[].preference.matchFields[].values[]

### Type

`string`

# .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution

### Description

If the affinity requirements specified by this field are not met at scheduling time, the pod will not be scheduled onto the node. If the affinity requirements specified by this field cease to be met at some point during pod execution (e.g. due to an update), the system may or may not try to eventually evict the pod from its node.

### Type

`object`

### Required

`nodeSelectorTerms`

| Property | Type | Description |
| --- | --- | --- |
| `nodeSelectorTerms` | `array` | Required. A list of node selector terms. The terms are ORed. |

# .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms

### Description

Required. A list of node selector terms. The terms are ORed.

### Type

`array`

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[]

### Description

A null or empty node selector term matches no objects. The requirements of them are ANDed. The TopologySelectorTerm type implements a subset of the NodeSelectorTerm.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `matchExpressions` | `array` | A list of node selector requirements by node's labels. |
| `matchFields` | `array` | A list of node selector requirements by node's fields. |

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchExpressions

### Description

A list of node selector requirements by node's labels.

### Type

`array`

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchExpressions[]

### Description

A node selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

**Type**

`object`

**Required**

`key` `operator`

| Property | Type | Description |
|---|---|---|
| `key` | `string` | The label key that the selector applies to. |
| `operator` | `string` | Represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists, DoesNotExist. Gt, and Lt. |
| `values` | `array` | An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch. |

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchExpressions[].values

**Description**

An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch.

**Type**

`array`

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchExpressions[].values[]

**Type**

`string`

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchFields

**Description**

A list of node selector requirements by node's fields.

**Type**

`array`

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchFields[]

**Description**

A node selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

**Type**

`object`

**Required**

`key` `operator`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The label key that the selector applies to. |
| `operator` | `string` | Represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists, DoesNotExist. Gt, and Lt. |
| `values` | `array` | An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch. |

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchFields[].values

### Description

An array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. If the operator is Gt or Lt, the values array must have a single element, which will be interpreted as an integer. This array is replaced during a strategic merge patch.

### Type

`array`

## .spec.nodeAffinity.requiredDuringSchedulingIgnoredDuringExecution.nodeSelectorTerms[].matchFields[].values[]

### Type

`string`

# .spec.nodeSelector

### Description

NodeSelector defines node labels for pod scheduling

### Type

`object`

# .spec.patroni

### Description

Patroni configuration for cluster management

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `failsafe_mode` | `boolean` | Enable failsafe mode for cluster |
| `initdb` | `object` | InitDB parameters for database initialization |
| `loop_wait` | `integer` | Loop wait time in seconds for leader election |
| `maximum_lag_on_failover` | `number` | Maximum lag in bytes allowed for failover (float32 because https://github.com/kubernetes/kubernetes/issues/30 ↗) |

| Property | Type | Description |
| --- | --- | --- |
| `pg_hba` | `array` | Custom pg_hba.conf entries |
| `retry_timeout` | `integer` | Retry timeout in seconds for operations |
| `slots` | `object` | Replication slots configuration |
| `synchronous_mode` | `boolean` | Enable synchronous replication |
| `synchronous_mode_strict` | `boolean` | Enable strict synchronous replication |
| `synchronous_node_count` | `integer` | Number of synchronous replicas |
| `ttl` | `integer` | Leader key TTL in seconds |

# .spec.patroni.initdb

### Description

InitDB parameters for database initialization

### Type

`object`

# .spec.patroni.pg_hba

### Description

Custom pg_hba.conf entries

### Type

`array`

## .spec.patroni.pg_hba[]

### Type

`string`

## .spec.patroni.slots

### Description

Replication slots configuration

### Type

`object`

## .spec.pgpool2Settings

### Description

Pgpool2Settings defines Pgpool-II configuration

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `dockerImage` | `string` | DockerImage specifies the container image to use for Pgpool-II |

| Property | Type | Description |
| --- | --- | --- |
| `maxPool` | `integer` | MaxPool defines the maximum number of cached connections per child process |
| `numInitChildren` | `integer` | NumInitChildren sets the number of preforked Pgpool-II server processes |
| `numberOfInstances` | `integer` | NumberOfInstances specifies how many Pgpool-II instances to run |
| `resources` | `object` | Resources specifies CPU and memory requirements for Pgpool-II containers |
| `user` | `string` | User specifies the database user for Pgpool-II connections |

# .spec.pgpool2Settings.resources

### Description

Resources specifies CPU and memory requirements for Pgpool-II containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `limits` | `object` | ResourceLimits defines the maximum resources allowed for containers |
| `requests` | `object` | ResourceRequests defines the minimum resources required for containers |

# .spec.pgpool2Settings.resources.limits

### Description

ResourceLimits defines the maximum resources allowed for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.pgpool2Settings.resources.requests

### Description

ResourceRequests defines the minimum resources required for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.podAnnotations

### Description

PodAnnotations defines annotations to add to pods

### Type

`object`

# .spec.postgresql

### Description

PostgreSQL version and configuration parameters including: - PostgreSQL major version (e.g. "14") - Configuration parameters (postgresql.conf) - Configuration parameters (postgresql.conf) PostgreSQL version and configuration parameters

### Type

`object`

### Required

`version`

| Property | Type | Description |
| --- | --- | --- |
| `parameters` | `object` | PostgreSQL configuration parameters (postgresql.conf) |

| Property | Type | Description |
| --- | --- | --- |
| `version` | `string` | PostgreSQL major version (e.g. "14") |

## .spec.postgresql.parameters

### Description

PostgreSQL configuration parameters (postgresql.conf)

### Type

`object`

## .spec.preparedDatabases

### Description

PreparedDatabases defines databases with pre-configured schemas and roles

### Type

`object`

## .spec.repairOption

### Description

RepairOption defines options for cluster repair

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `autoRecovery` | `boolean` | AutoRecovery enables automatic recovery attempts for failed clusters |

| Property | Type | Description |
| --- | --- | --- |
| `startTimeout` | `integer` | StartTimeout defines the maximum time (in seconds) to wait for cluster startup before recovery |

# .spec.replicaServiceAnnotations

### Description

ReplicaServiceAnnotations defines annotations for replica service

### Type

`object`

# .spec.resources

### Description

Resource requests and limits for PostgreSQL containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `limits` | `object` | ResourceLimits defines the maximum resources allowed for containers |
| `requests` | `object` | ResourceRequests defines the minimum resources required for containers |

# .spec.resources.limits

### Description

ResourceLimits defines the maximum resources allowed for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

## .spec.resources.requests

### Description

ResourceRequests defines the minimum resources required for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

## .spec.serviceAnnotations

### Description

ServiceAnnotations defines annotations to add to services

**Type**

`object`

# .spec.serviceTemplates

**Description**

ServiceTemplates defines custom service templates

**Type**

`object`

# .spec.sidecars

**Description**

Sidecars defines additional containers to run in the pod

**Type**

`array`

# .spec.sidecars[]

**Description**

Sidecar defines a container to be run in the same pod as the Postgres container.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `env` | `array` | Env defines environment variables to set in the sidecar container |

| Property | Type | Description |
| --- | --- | --- |
| `image` | `string` | DockerImage specifies the container image to use for the sidecar |
| `name` | `string` | Name specifies the unique name of the sidecar container within the pod |
| `ports` | `array` | Ports defines the network ports to expose from the sidecar container |
| `resources` | `object` | Resources defines CPU and memory requirements for the sidecar container |

## .spec.sidecars[].env

### Description

Env defines environment variables to set in the sidecar container

### Type

`array`

## .spec.sidecars[].env[]

### Description

EnvVar represents an environment variable present in a Container.

### Type

`object`

### Required

`name`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the environment variable. Must be a C_IDENTIFIER. |
| `value` | `string` | Variable references $(VAR_NAME) are expanded using the previously defined environment variables in the container and any service environment variables. If a variable cannot be resolved, the reference in the input string will be unchanged. Double $$ are reduced to a single $, which allows for escaping the $(VAR_NAME) syntax: i.e. "$$(VAR_NAME)" will produce the string literal "$(VAR_NAME)". Escaped references will never be expanded, regardless of whether the variable exists or not. Defaults to "". |
| `valueFrom` | `object` | Source for the environment variable's value. Cannot be used if value is not empty. |

# .spec.sidecars[].env[].valueFrom

### Description

Source for the environment variable's value. Cannot be used if value is not empty.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `configMapKeyRef` | `object` | Selects a key of a ConfigMap. |

| Property | Type | Description |
| --- | --- | --- |
| `fieldRef` | `object` | Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs. |
| `resourceFieldRef` | `object` | Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported. |
| `secretKeyRef` | `object` | Selects a key of a secret in the pod's namespace |

## .spec.sidecars[].env[].valueFrom.configMapKeyRef

### Description

Selects a key of a ConfigMap.

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key to select. |

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the ConfigMap or its key must be defined |

# .spec.sidecars[].env[].valueFrom.fieldRef

### Description

Selects a field of the pod: supports metadata.name, metadata.namespace, `metadata.labels['<KEY>']`, `metadata.annotations['<KEY>']`, spec.nodeName, spec.serviceAccountName, status.hostIP, status.podIP, status.podIPs.

### Type

`object`

### Required

`fieldPath`

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | Version of the schema the FieldPath is written in terms of, defaults to "v1". |
| `fieldPath` | `string` | Path of the field to select in the specified API version. |

# .spec.sidecars[].env[].valueFrom.resourceFieldRef

### Description

Selects a resource of the container: only resources limits and requests (limits.cpu, limits.memory, limits.ephemeral-storage, requests.cpu, requests.memory and requests.ephemeral-storage) are currently supported.

### Type

`object`

### Required

`resource`

| Property | Type | Description |
| --- | --- | --- |
| `containerName` | `string` | Container name: required for volumes, optional for env vars |
| `divisor` | | Specifies the output format of the exposed resources, defaults to "1" |
| `resource` | `string` | Required: resource to select |

## .spec.sidecars[].env[].valueFrom.secretKeyRef

### Description

Selects a key of a secret in the pod's namespace

### Type

`object`

### Required

`key`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | The key of the secret to select from. Must be a valid secret key. |
| `name` | `string` | Name of the referent. More info: https://kubernetes.io/docs/concepts/overview/working-with-objects/names/#names ↗ TODO: Add other useful fields. apiVersion, kind, uid? |
| `optional` | `boolean` | Specify whether the Secret or its key must be defined |

# .spec.sidecars[].ports

### Description

Ports defines the network ports to expose from the sidecar container

### Type

`array`

# .spec.sidecars[].ports[]

### Description

ContainerPort represents a network port in a single container.

### Type

`object`

### Required

`containerPort`

| Property | Type | Description |
| --- | --- | --- |
| `containerPort` | `integer` | Number of port to expose on the pod's IP address. This must be a valid port number, 0 < x < 65536. |
| `hostIP` | `string` | What host IP to bind the external port to. |
| `hostPort` | `integer` | Number of port to expose on the host. If specified, this must be a valid port number, 0 < x < 65536. If HostNetwork is specified, this must match ContainerPort. Most containers do not need this. |
| `name` | `string` | If specified, this must be an IANA_SVC_NAME and unique within the pod. Each named port in a pod must have a unique name. Name for the port that can be referred to by services. |
| `protocol` | `string` | Protocol for port. Must be UDP, TCP, or SCTP. Defaults to "TCP". |

# .spec.sidecars[].resources

### Description

Resources defines CPU and memory requirements for the sidecar container

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `limits` | `object` | ResourceLimits defines the maximum resources allowed for containers |
| `requests` | `object` | ResourceRequests defines the minimum resources required for containers |

# .spec.sidecars[].resources.limits

### Description

ResourceLimits defines the maximum resources allowed for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.sidecars[].resources.requests

### Description

ResourceRequests defines the minimum resources required for containers

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `cpu` | `string` | CPU requirement (e.g., "500m" or "1") |
| `memory` | `string` | Memory requirement (e.g., "512Mi" or "2Gi") |

# .spec.standby

### Description

StandbyCluster defines configuration for standby clusters

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `gs_wal_path` | `string` | GSWalPath specifies the Google Cloud Storage path for WAL archiving (e.g. "gs://bucket/path") |
| `s3_wal_path` | `string` | S3WalPath specifies the S3 path for WAL archiving (e.g. "s3://bucket/path") |
| `standby_host` | `string` | StandbyHost specifies the hostname or IP address of the primary cluster |
| `standby_port` | `string` | StandbyPort specifies the port number of the primary cluster |

# .spec.streams

### Description

Streams defines configuration for streaming data

### Type

`array`

# .spec.streams[]

### Description

Stream defines properties for creating FabricEventStream resources

### Type

`object`

### Required

`applicationId` `database` `tables`

| Property | Type | Description |
| --- | --- | --- |
| `applicationId` | `string` | ApplicationId is the unique identifier for the application producing the event stream |
| `batchSize` | `integer` | BatchSize controls how many events are batched together before being processed |
| `database` | `string` | Database specifies the PostgreSQL database where the event tables are located |

| Property | Type | Description |
| --- | --- | --- |
| `filter` | `object` | Filter specifies optional filtering conditions for the event stream |
| `tables` | `object` | Tables defines the mapping of table names to their stream configurations |

## .spec.streams[].filter

### Description

Filter specifies optional filtering conditions for the event stream

### Type

`object`

## .spec.streams[].tables

### Description

Tables defines the mapping of table names to their stream configurations

### Type

`object`

## .spec.tls

### Description

TLS defines TLS configuration for the cluster

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `caFile` | `string` | CAFile specifies the path to the CA certificate file for client verification |
| `caSecretName` | `string` | CASecretName specifies the Kubernetes secret containing the CA certificate |
| `certificateFile` | `string` | CertificateFile specifies the path to the server certificate file |
| `privateKeyFile` | `string` | PrivateKeyFile specifies the path to the server private key file |
| `secretName` | `string` | SecretName specifies the Kubernetes secret containing TLS certificates |

# .spec.tolerations

### Description

Tolerations defines pod tolerations for node taints

### Type

`array`

# .spec.tolerations[]

### Description

The pod this Toleration is attached to tolerates any taint that matches the triple <key,value,effect> using the matching operator <operator>.

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `effect` | `string` | Effect indicates the taint effect to match. Empty means match all taint effects. When specified, allowed values are NoSchedule, PreferNoSchedule and NoExecute. |
| `key` | `string` | Key is the taint key that the toleration applies to. Empty means match all taint keys. If the key is empty, operator must be Exists; this combination means to match all values and all keys. |
| `operator` | `string` | Operator represents a key's relationship to the value. Valid operators are Exists and Equal. Defaults to Equal. Exists is equivalent to wildcard for value, so that a pod can tolerate all taints of a particular category. |
| `tolerationSeconds` | `integer` | TolerationSeconds represents the period of time the toleration (which must be of effect NoExecute, otherwise this field is ignored) tolerates the taint. By default, it is not set, which means tolerate the taint forever (do not evict). Zero and negative values will be treated as 0 (evict immediately) by the system. |

| Property | Type | Description |
| --- | --- | --- |
| `value` | `string` | Value is the taint value the toleration matches to. If the operator is Exists, the value should be empty, otherwise just a regular string. |

## .spec.upgradeOption

### Description

UpgradeOption defines upgrade options

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `crVersion` | `string` | CRVersion specifies the target custom resource version for the upgrade |

## .spec.users

### Description

Users defines additional PostgreSQL users and their roles

### Type

`object`

## .spec.usersCustomizedPasswd

### Description

UsersCustomizedPasswd stores custom passwords for users

### Type

`object`

## .spec.usersWithInPlaceSecretRotation

### Description

UsersWithInPlaceSecretRotation defines users requiring in-place secret rotation

### Type

`array`

## .spec.usersWithInPlaceSecretRotation[]

### Type

`string`

## .spec.usersWithSecretRotation

### Description

UsersWithSecretRotation defines users requiring secret rotation

### Type

`array`

## .spec.usersWithSecretRotation[]

### Type

`string`

## .spec.volume

### Description

Volume configuration for PostgreSQL data storage

### Type

`object`

### Required

`size`

| Property | Type | Description |
|---|---|---|
| `iops` | `integer` | IOPS for provisioned IOPS SSD volumes |
| `selector` | `object` | Selector for matching existing PersistentVolumeClaims |
| `size` | `string` | Size of the volume (e.g., "100Gi") |
| `storageClass` | `string` | StorageClass name for dynamic provisioning |
| `subPath` | `string` | SubPath within the volume to mount |
| `throughput` | `integer` | Throughput for gp3 volumes (MiB/s) |
| `type` | `string` | VolumeType for EBS volumes (gp2, gp3, io1, etc.) |

## .spec.volume.selector

### Description

Selector for matching existing PersistentVolumeClaims

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `matchExpressions` | `array` | matchExpressions is a list of label selector requirements. The requirements are ANDed. |
| `matchLabels` | `object` | matchLabels is a map of {key,value} pairs. A single {key,value} in the matchLabels map is equivalent to an element of matchExpressions, whose key field is "key", the operator is "In", and the values array contains only "value". The requirements are ANDed. |

# .spec.volume.selector.matchExpressions

### Description

matchExpressions is a list of label selector requirements. The requirements are ANDed.

### Type

`array`

# .spec.volume.selector.matchExpressions[]

### Description

A label selector requirement is a selector that contains values, a key, and an operator that relates the key and values.

### Type

`object`

### Required

`key` `operator`

| Property | Type | Description |
| --- | --- | --- |
| `key` | `string` | key is the label key that the selector applies to. |
| `operator` | `string` | operator represents a key's relationship to a set of values. Valid operators are In, NotIn, Exists and DoesNotExist. |
| `values` | `array` | values is an array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. This array is replaced during a strategic merge patch. |

## .spec.volume.selector.matchExpressions[].values

### Description

values is an array of string values. If the operator is In or NotIn, the values array must be non-empty. If the operator is Exists or DoesNotExist, the values array must be empty. This array is replaced during a strategic merge patch.

### Type

`array`

## .spec.volume.selector.matchExpressions[].values[]

### Type

`string`

## .spec.volume.selector.matchLabels

### Description

matchLabels is a map of {key,value} pairs. A single {key,value} in the matchLabels map is equivalent to an element of matchExpressions, whose key field is "key", the operator is "In", and the values array contains only "value". The requirements are ANDed.

**Type**

`object`

## .status

**Description**

Status defines the observed state of the PostgreSQL cluster including current status, patroni state, and any error messages.

**Type**

`object`

| Property | Type | Description |
| --- | --- | --- |
| `PostgresClusterStatus` | `string` | PostgresClusterStatus indicates the current operational state of the PostgreSQL cluster |
| `UsersCustomizedPasswdStatus` | `string` | UsersCustomizedPasswdStatus tracks the status of custom password management for database users |
| `clusterReplicationRole` | `string` | ClusterReplicationRole indicates the replication role (primary/replica) of this cluster |

| Property | Type | Description |
| --- | --- | --- |
| `message` | `string` | Message provides additional details about the cluster status or error conditions |
| `patroniStatus` | `object` | PatroniStatus contains status information for each Patroni-managed PostgreSQL instance |
| `upgradeStatus` | `object` | UpgradeStatus tracks version information for operator and custom resource upgrades |

## .status.patroniStatus

### Description

PatroniStatus contains status information for each Patroni-managed PostgreSQL instance

### Type

`object`

## .status.upgradeStatus

### Description

UpgradeStatus tracks version information for operator and custom resource upgrades

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `crVersion` | `string` | CRVersion tracks the version of the custom resource specification |
| `operatorVersion` | `string` | OperatorVersion tracks the version of the operator that last processed this cluster |

# API Endpoints

The following API endpoints are available:

- `/apis/acid.zalan.do/v1/namespaces/{namespace}/postgresqls`
  - `DELETE`: delete collection of postgresql
  - `GET`: list objects of kind postgresql
  - `POST`: create a new postgresql
- `/apis/acid.zalan.do/v1/namespaces/{namespace}/postgresqls/{name}`
  - `DELETE`: delete the specified postgresql
  - `GET`: read the specified postgresql
  - `PATCH`: partially update the specified postgresql
  - `PUT`: replace the specified postgresql
- `/apis/acid.zalan.do/v1/namespaces/{namespace}/postgresqls/{name}/status`
  - `GET`: read status of the specified postgresql
  - `PATCH`: partially update status of the specified postgresql
  - `PUT`: replace status of the specified postgresql

# /apis/acid.zalan.do/v1/namespaces/{namespace}/postgresqls

### HTTP method

`DELETE`

### Description

delete collection of postgresql

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `Status↗` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`GET`

### Description

list objects of kind postgresql

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresqlList` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`POST`

### Description

create a new postgresql

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `postgresql` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 201 - Created | `postgresql` schema |
| 202 - Accepted | `postgresql` schema |

| HTTP code | Response body |
| --- | --- |
| 401 - Unauthorized | Empty |

# /apis/acid.zalan.do/v1/namespaces/{namespace}/postgresqls/{name}

### HTTP method

`DELETE`

### Description

delete the specified postgresql

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `Status↗` schema |
| 202 - Accepted | `Status↗` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`GET`

### Description

read the specified postgresql

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PATCH`

### Description

partially update the specified postgresql

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PUT`

### Description

replace the specified postgresql

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `postgresql` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 201 - Created | `postgresql` schema |
| 401 - Unauthorized | Empty |

## /apis/acid.zalan.do/v1/namespaces/{namespace}/postgresqls/{name}/status

### HTTP method

`GET`

### Description

read status of the specified postgresql

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PATCH`

### Description

partially update status of the specified postgresql

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PUT`

### Description

replace status of the specified postgresql

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `postgresql` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `postgresql` schema |
| 201 - Created | `postgresql` schema |
| 401 - Unauthorized | Empty |

# PostgresBackup

### Description

PostgresBackup is the Schema for the postgresbackups API

### Type

`object`

---

## Specification

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | APIVersion defines the versioned schema of this representation of an object. Servers should convert recognized schemas to the latest internal value, and may reject unrecognized values. More info: https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md#resources ↗ |
| `kind` | `string` | Kind is a string value representing the REST resource this object represents. Servers may infer this from the endpoint the client submits requests to. Cannot be updated. In CamelCase. More info: https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md#types-kinds ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `metadata` | `ObjectMeta↗` | ObjectMeta is metadata that all persisted resources must have, which includes all objects users must create. |
| `spec` | `object` | PostgresBackupSpec defines the desired state of PostgresBackup |
| `status` | `object` | PostgresBackupStatus defines the observed state of PostgresBackup |

## .spec

### Description

PostgresBackupSpec defines the desired state of PostgresBackup

### Type

`object`

### Required

`cluster`

| Property | Type | Description |
| --- | --- | --- |
| `cluster` | `string` | Cluster is the name of the PostgreSQL cluster to backup |
| `executeNode` | `string` | ExecuteNode specifies the node where the backup job should run If empty, the backup controller will automatically select a node |

# .status

## Description

PostgresBackupStatus defines the observed state of PostgresBackup

## Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `backupName` | `string` | BackupName is the unique name of this backup instance |
| `clusterUid` | `string` | ClusterUid is the unique identifier of the PostgreSQL cluster |
| `configBackupStorage` | `object` | ConfigBackupStorage contains the configuration for the backup storage |
| `error` | `string` | Error contains any error messages from the backup operation |
| `executeNode` | `string` | ExecuteNode is the node where the backup job is running |
| `finishLsn` | `integer` | FinishLsn is the log sequence number when the backup finished |

| Property | Type | Description |
| --- | --- | --- |
| `finishTime` | `string` | FinishTime is when the backup operation completed |
| `lastModified` | `string` | LastModified is the timestamp when the backup was last modified |
| `pgVersion` | `string` | PGVersion is the PostgreSQL version of the cluster being backed up |
| `startLsn` | `integer` | StartLsn is the log sequence number when the backup started |
| `startTime` | `string` | StartTime is when the backup operation began |
| `state` | `string` | State represents the current state of the backup operation Possible values: "", "running", "failed", "succeeded", "deleteFailed" |

## .status.configBackupStorage

### Description

ConfigBackupStorage contains the configuration for the backup storage

### Type

`object`

### Required

`bucket` `name` `namespace`

| Property | Type | Description |
| --- | --- | --- |
| `bucket` | `string` | |
| `name` | `string` | |
| `namespace` | `string` | |

# API Endpoints

The following API endpoints are available:

- `/apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresbackups`
  - `DELETE`: delete collection of PostgresBackup
  - `GET`: list objects of kind PostgresBackup
  - `POST`: create a new PostgresBackup
- `/apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresbackups/{name}`
  - `DELETE`: delete the specified PostgresBackup
  - `GET`: read the specified PostgresBackup
  - `PATCH`: partially update the specified PostgresBackup
  - `PUT`: replace the specified PostgresBackup
- `/apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresbackups/{name}/status`
  - `GET`: read status of the specified PostgresBackup
  - `PATCH`: partially update status of the specified PostgresBackup
  - `PUT`: replace status of the specified PostgresBackup

# /apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresbackups

### HTTP method

`DELETE`

### Description

delete collection of PostgresBackup

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `Status↗` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`GET`

### Description

list objects of kind PostgresBackup

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackupList` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`POST`

### Description

create a new PostgresBackup

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `PostgresBackup` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 201 - Created | `PostgresBackup` schema |
| 202 - Accepted | `PostgresBackup` schema |

| HTTP code | Response body |
| --- | --- |
| 401 - Unauthorized | Empty |

# /apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresbackups/{name}

### HTTP method

`DELETE`

### Description

delete the specified PostgresBackup

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `Status↗` schema |
| 202 - Accepted | `Status↗` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`GET`

### Description

read the specified PostgresBackup

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PATCH`

### Description

partially update the specified PostgresBackup

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PUT`

### Description

replace the specified PostgresBackup

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `PostgresBackup` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 201 - Created | `PostgresBackup` schema |
| 401 - Unauthorized | Empty |

## /apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresbackups/{name}/status

### HTTP method

`GET`

### Description

read status of the specified PostgresBackup

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PATCH`

### Description

partially update status of the specified PostgresBackup

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PUT`

### Description

replace status of the specified PostgresBackup

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `PostgresBackup` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresBackup` schema |
| 201 - Created | `PostgresBackup` schema |
| 401 - Unauthorized | Empty |

# PostgresRestore

### Description

PostgresRestore is the Schema for the postgresrestores API

### Type

`object`

## Specification

| Property | Type | Description |
| --- | --- | --- |
| `apiVersion` | `string` | APIVersion defines the versioned schema of this representation of an object. Servers should convert recognized schemas to the latest internal value, and may reject unrecognized values. More info: https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md#resources ↗ |
| `kind` | `string` | Kind is a string value representing the REST resource this object represents. Servers may infer this from the endpoint the client submits requests to. Cannot be updated. In CamelCase. More info: https://git.k8s.io/community/contributors/devel/sig-architecture/api-conventions.md#types-kinds ↗ |

| Property | Type | Description |
| --- | --- | --- |
| `metadata` | `ObjectMeta` | ObjectMeta is metadata that all persisted resources must have, which includes all objects users must create. |
| `spec` | `object` | PostgresRestoreSpec defines the desired state of PostgresRestore |
| `status` | `object` | PostgresRestoreStatus defines the observed state of PostgresRestore |

## .spec

### Description

PostgresRestoreSpec defines the desired state of PostgresRestore

### Type

`object`

### Required

`backupCluster` `targetCluster` `timestamp`

| Property | Type | Description |
| --- | --- | --- |
| `backupCluster` | `object` | BackupCluster contains details about the source backup cluster |
| `targetCluster` | `string` | TargetCluster is the name of the PostgreSQL cluster to restore into |

| Property | Type | Description |
| --- | --- | --- |
| `timestamp` | `string` | Timestamp specifies the point-in-time to restore to in RFC3339 format |

# .spec.backupCluster

### Description

BackupCluster contains details about the source backup cluster

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `name` | `string` | Name of the source PostgreSQL cluster |
| `storage` | `object` | Storage configuration for accessing the backup |
| `uid` | `string` | Uid is the unique identifier of the source cluster |

# .spec.backupCluster.storage

### Description

Storage configuration for accessing the backup

### Type

`object`

### Required

`bucket` `name` `namespace`

| Property | Type | Description |
| --- | --- | --- |
| `bucket` | `string` | Bucket name where backups are stored |
| `name` | `string` | Name of the storage configuration |
| `namespace` | `string` | Namespace where the storage configuration is located |
| `s3Option` | `object` | S3Option contains S3-specific storage options |

## .spec.backupCluster.storage.s3Option

### Description

S3Option contains S3-specific storage options

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `awsS3ForcePathStyle` | `string` | AwsS3ForcePathStyle enables path-style S3 URLs (s3.amazonaws.com/BUCKET/KEY) |
| `s3ForcePathStyle` | `boolean` | S3ForcePathStyle forces path-style S3 URLs |

| Property | Type | Description |
| --- | --- | --- |
| `useWalg` | `boolean` | UseWalg enables the WAL-G backup tool |
| `useWalgBackup` | `boolean` | UseWalgBackup enables WAL-G for backup operations |
| `walgDisableS3Sse` | `boolean` | WalgDisableS3Sse disables S3 server-side encryption for WAL-G |

## .status

### Description

PostgresRestoreStatus defines the observed state of PostgresRestore

### Type

`object`

| Property | Type | Description |
| --- | --- | --- |
| `error` | `string` | Error contains any error messages from the restore operation |
| `state` | `string` | State represents the current state of the restore operation |

# API Endpoints

The following API endpoints are available:

- `/apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresrestores`
  - `DELETE`: delete collection of PostgresRestore
  - `GET`: list objects of kind PostgresRestore
  - `POST`: create a new PostgresRestore
- `/apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresrestores/{name}`
  - `DELETE`: delete the specified PostgresRestore
  - `GET`: read the specified PostgresRestore
  - `PATCH`: partially update the specified PostgresRestore
  - `PUT`: replace the specified PostgresRestore
- `/apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresrestores/{name}/status`
  - `GET`: read status of the specified PostgresRestore
  - `PATCH`: partially update status of the specified PostgresRestore
  - `PUT`: replace status of the specified PostgresRestore

# /apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresrestores

### HTTP method

`DELETE`

### Description

delete collection of PostgresRestore

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `Status` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`GET`

### Description

list objects of kind PostgresRestore

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestoreList` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`POST`

### Description

create a new PostgresRestore

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default |

| Parameter | Type | Description |
| --- | --- | --- |
| | | in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `PostgresRestore` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 201 - Created | `PostgresRestore` schema |
| 202 - Accepted | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |

## /apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresrestores/{name}

### HTTP method

`DELETE`

### Description

delete the specified PostgresRestore

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `Status↗` schema |
| 202 - Accepted | `Status↗` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`GET`

### Description

read the specified PostgresRestore

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PATCH`

### Description

partially update the specified PostgresRestore

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PUT`

### Description

replace the specified PostgresRestore

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `PostgresRestore` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 201 - Created | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |

# /apis/middleware.alauda.io/v1/namespaces/{namespace}/postgresrestores/{name}/status

### HTTP method

`GET`

### Description

read status of the specified PostgresRestore

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PATCH`

### Description

partially update status of the specified PostgresRestore

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a |

| Parameter | Type | Description |
| --- | --- | --- |
| | | warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |

### HTTP method

`PUT`

### Description

replace status of the specified PostgresRestore

### Query parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `dryRun` | `string` | When present, indicates that modifications should not be persisted. An invalid or unrecognized dryRun directive will result in an error response and no further processing of the request. Valid values are: - All: all dry run stages will be processed |
| `fieldValidation` | `string` | fieldValidation instructs the server on how to handle objects in the request (POST/PUT/PATCH) containing unknown or duplicate fields. Valid values are: - Ignore: This will ignore any unknown fields that are silently dropped from the object, and will ignore all but the last |

| Parameter | Type | Description |
| --- | --- | --- |
| | | duplicate field that the decoder encounters. This is the default behavior prior to v1.23. - Warn: This will send a warning via the standard warning response header for each unknown field that is dropped from the object, and for each duplicate field that is encountered. The request will still succeed if there are no other errors, and will only persist the last of any duplicate fields. This is the default in v1.23+ - Strict: This will fail the request with a BadRequest error if any unknown fields would be dropped from the object, or if any duplicate fields are present. The error returned from the server will contain all unknown and duplicate fields encountered. |

### Body parameters

| Parameter | Type | Description |
| --- | --- | --- |
| `body` | `PostgresRestore` schema | `application/json` formatted |

### HTTP responses

| HTTP code | Response body |
| --- | --- |
| 200 - OK | `PostgresRestore` schema |
| 201 - Created | `PostgresRestore` schema |
| 401 - Unauthorized | Empty |