# Kubernetes Installer Comparison

| Features | KubeOne | Kubespray | Kind | Kubeadm | OpenShift Origin | Airship |
|---|---|---|---|---|---|---|
| Declarative Cluster Configuration - describing the K8s cluster including infra components (eg. CRI, CNI), versions, number of nodes (master+worker), architecture, K8s certificates | Y | Y | N | N | Y | Y. Uses Kustomize for layering and substitution. |
| Templated configuration | Y | Y | N | N | Y | Y. Uses Kustomize |
| Centralized configuration model | Y | Y | Y | N | Y | Y |
| Ability to use existing machines (from machine provisioning stage) | | Y | Y | Y | Y | TBD. Recognizes the use case of "bring your own OS", but not committed to implementing in v2.0. |
| Ability to manage underlying infrastructure (i.e. to create and configure nodes for use by a cluster) | Y | N | unknown | N | depends on infra provider | Yes, integrates cluster-api-provider-metal3 |
| Support for different architectures: Arm and x86 | Y | N | N | Y | unknown | N.  ARM is out of scope for v2.0. Operators are welcome to step up and add the support. |
| K8s clusters pass conformance test | Y | Y | Y | Y | unknown | TBD, May run internally. |
| 100% open source | Y | Y | Y | Y | Y | Y |
| Support all CNCF-hosted projects | Y | | | | unknown | Yes. Airship architecture allows users to deploy additional extensions and add-ons. If an extension has Helm charts, it can be optionally added to Airship life cycle management experience. |
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| Support for specific versions of K8s | Y | N | Y | Y | Y | Y |
| Specific versions of K8s components | Y | | | | Y | Y |
| etcd | Y | Y | Y | Y | Y | Y |
| Support for deploying from HEAD / `master` branch of K8s | Y | N | Y | Y | unknown | ? |
| Container runtimes (containerd, cri-o) with specific versions | Y | Y | N | Y | Y | Y, uses cluster api kubeadm provider |
| Kubernetes add-ons/extensions installation (e.g. CNI, CSI, Service Mesh, Ingress, LB, etc.) | | partially | | | | Y |
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| Hybrid Support both VNF and CNF | | | | | | Y |
| Customizable - pick and choose what and when to use for installation | | | | | | Y |
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