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    - \* Action Required
    - \* Other notable changes
- v1.3.0-alpha.4
  - Downloads
  - Changes since v1.3.0-alpha.3
    - \* Action Required
    - \* Other notable changes
- v1.3.0-alpha.3
  - Downloads
  - Changes since v1.3.0-alpha.2
    - \* Action Required
    - \* Other notable changes
- v1.3.0-alpha.2
  - Downloads
  - Changes since v1.3.0-alpha.1
    - \* Other notable changes
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    - \* Action Required

\* Other notable changes

## v1.3.10

Documentation & Examples

### Downloads for v1.3.10

filename	sha256 hash
kubernetes.tar.gz	0f61517fbab1feafbe1024da0b88bfe16e61fed7e612285d70e3ecb53ce5183
kubernetes-src.tar.gz	7b1be0dcc12ae1b0cb1928b770c1025755fd0858ce7520907bacda19e5bfa53

### Client Binaries

filename	sha256 hash
kubernetes-client-darwin-386.tar.gz	64a7012411a506ff7825e7b9c64b50197917d6f4e1128ea0e7b30a121059da7
kubernetes-client-darwin-amd64.tar.gz	5d85843e643eaebe3e34e48810f4786430b5ecce915144e01ba2d8539aa7730
kubernetes-client-linux-386.tar.gz	06d478c601b1d4aa1fc539e9120adbcbbd2fb370d062516f84a064e465d8ead
kubernetes-client-linux-amd64.tar.gz	fe571542482b8ba3ff94b9e5e9657f6ab4fc0feb8971930dc80b7ae2548d669
kubernetes-client-linux-arm64.tar.gz	176b52d35150ca9f08a7e90e33e2839b7574afe350edf4fafa46745d77bb5aa
kubernetes-client-linux-arm.tar.gz	1c3bf4ac1e4eb0e02f785db725efd490beaf06c8acd26d694971ba510b60a9
kubernetes-client-linux-ppc64le.tar.gz	172cd0af71fcba7c51e9476732dbe86ba251c03b1d74f912111e4e755be540
kubernetes-client-windows-386.tar.gz	f2d2f82d7e285c98d8cc58a8a6e13a1122c9f60bb2c73e4cefe3555f963e56
kubernetes-client-windows-amd64.tar.gz	ac0aa2b09dfefb8001e76f3aefe82c7bd2fda5bd0ef744ac3aed966b99c8dc8

### Server Binaries

filename	sha256 hash
kubernetes-server-linux-amd64.tar.gz	bf0d3924ff84c95c316fcb4b21876cc019bd648ca8ab87fd6b2712ccda3099
kubernetes-server-linux-arm64.tar.gz	45e88d1c8edc17d7f1deab8d040a769d8647203c465d76763abb1ce445a987

filename	sha256 hash
kubernetes-server-linux-arm.tar.gz	40ac46a265021615637f07d532cd563b4256dcf340a27c594bfd3501fe66b84
kubernetes-server-linux-ppc64le.tar.gz	f5a5075ab3e6688666bbb274fa55a825513ee082a3b17bcddb5b8f4fd6f9a

## Changelog since v1.3.9

### Other notable changes

- gci: decouple from the built-in kubelet version (#31367, @Amey-D)
- Bump GCE debian image to container-vm-v20161025 (CVE-2016-5195 Dirty... (#35825, @dchen1107)
- Add RELEASE\_INFRA\_PUSH related code to support pushes from kubernetes/release. (#28922, @david-mcmahon)

## v1.3.9

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	a994c732d2b852bbee55a78601d50d046323021a99b0801aea07dacf64c2c59a

## Changelog since v1.3.8

### Other notable changes

- Test x509 intermediates correctly (#34524, @liggitt)
- Remove headers that are unnecessary for proxy target (#34076, @mbohlool)

## v1.3.8

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	66cf72d8f07e2f700acfcbb11536694e0d904483611ff154f34a8380c63720a8d

## Changelog since v1.3.7

### Other notable changes

- AWS: fix volume device assignment race condition (#31090, @justinsb)

## v1.3.7

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	ad18566a09ff87b36107c2ea238fa5e20988d7a62c85df9c8598920679fec4a1

## Changelog since v1.3.6

### Other notable changes

- AWS: Add ap-south-1 to list of known AWS regions (#28428, @justinsb)
- Back porting critical vSphere bug fixes to release 1.3 (#31993, @dagnello)
- Back port - Openstack provider allowing more than one service port for lbaas v2 (#32001, @dagnello)
- Fix a bug in kubelet hostport logic which flushes KUBE-MARK-MASQ iptables chain (#32413, @freehan)
- Fixes the panic that occurs in the federation controller manager when registering a GKE cluster to the federation. Fixes issue #30790. (#30940, @madhusudancs)

## v1.3.6

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	2db7ace2f72a2e162329a6dc969a5a158bb8c5d0f8054c5b1b2b1063aa22020d

## Changelog since v1.3.5

### Other notable changes

- Addresses vSphere Volume Attach limits (#29881, @dagnello)

- Increase request timeout based on termination grace period (#31275, @dims)
- Skip safe to detach check if node API object no longer exists (#30737, @saad-ali)
- Nodecontroller doesn't flip readiness on pods if kubeletVersion < 1.2.0 (#30828, @bprashanth)
- Update cadvisor to v0.23.9 to fix a problem where attempting to gather container filesystem usage statistics could result in corrupted devicemapper thin pool storage for Docker. (#30307, @sjenning)

## v1.3.5

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	46be88ce927124f7cef7e280720b42c63051086880b7ebdba298b561dbe19f82

## Changelog since v1.3.4

### Other notable changes

- Update Dashboard UI to version v1.1.1 (#30273, @bryk)
- allow restricting subresource access (#30001, @deads2k)
- Fix PVC.Status.Capacity and AccessModes after binding (#29982, @jsafrane)
- oidc authentication plugin: don't trim issuer URLs with trailing slashes (#29860, @ericchiang)
- network/cni: Bring up the lo interface for rkt (#29310, @euank)
- Fixing kube-up for CVM masters. (#29140, @maisem)

## v1.3.4

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	818acc1a8ba61cff434d4c0c5aa3d342d06e6907b565cfd8651b8cfcf3f0a1e6

## Changelog since v1.3.3

### Other notable changes

- NetworkPolicy cherry-pick 1.3 (#29556, @caseydavenport)
- Allow mounts to run in parallel for non-attachable volumes (#28939, @saad-ali)
- add enhanced volume and mount logging for block devices (#24797, @screeley44)
- kube-up: increase download timeout for kubernetes.tar.gz (#29426, @justinsb)
- Fix RBAC authorizer of ServiceAccount (#29071, @albatross0)
- Update docker engine-api to dea108d3aa (#29144, @ronnielai)
- Assume volume is detached if node doesn't exist (#29485, @saad-ali)
- Make PD E2E Tests Wait for Detach to Prevent Kernel Errors (#29031, @saad-ali)
- Fix "PVC Volume not detached if pod deleted via namespace deletion" issue (#29077, @saad-ali)
- append an abac rule for \$KUBE\_USER. (#29164, @cjcullen)

## v1.3.3

Documentation & Examples

### Downloads

binary	sha256 hash
kubernetes.tar.gz	a92a74a0d3f7d02d01ac2c8dfb5ee2e97b0485819e77b2110eb7c6b7c782478c

## Changelog since v1.3.2

### Other notable changes

- Removing images with multiple tags (#29316, @ronnielai)
- kubectl: don't display an empty list when trying to get a single resource that isn't found (#28294, @ncdc)
- Fix working\_set calculation in kubelet (#29154, @vishh)
- Don't delete affinity when endpoints are empty (#28655, @freehan)
- GCE bring-up: Differentiate NODE\_TAGS from NODE\_INSTANCE\_PREFIX (#29141, @zmerlynn)
- Fix logrotate config on GCI (#29139, @adityakali)
- Do not query the metadata server to find out if running on GCE. Retry metadata server query for gcr if running on gce. (#28871, @vishh)
- Fix GPU resource validation (#28743, @therc)

- Scale kube-proxy conntrack limits by cores (new default behavior) (#28876, @thockin)
- Don't recreate lb cloud resources on kcm restart (#29082, @bprashanth)

## Known Issues

There are a number of known issues that have been found and are being worked on. Please be aware of them as you test your workloads.

- PVC Volume not detached if pod deleted via namespace deletion (29051)
- Google Compute Engine PD Detach fails if node no longer exists (29358)
- Mounting (only 'default-token') volume takes a long time when creating a batch of pods (parallelization issue) (28616)
- Error while tearing down pod, "device or resource busy" on service account secret (28750)

## v1.3.2

Documentation & Examples

## Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	f46664d04dc2966c77d8727bba175570659941572	175570659941572585d0432dd5ce3abc7

## Changelog since v1.3.1

### Other notable changes

- List all nodes and occupy cidr map before starting allocations (#29062, @bprashanth)
- Fix watch cache filtering (#28968, @liggitt)
- Lock all possible kubecfg files at the beginning of ModifyConfig. (#28232, @cjcullen)

## v1.3.1

Documentation & Examples

## Downloads



binary	sha1 hash	md5 hash
kubernetes.tar.gz	5645b12beda22137204439de826066290925783d1322d9a0a29ef385190	6066290925783d1322d9a0a29ef385190

## Changelog since v1.3.0

### Other notable changes

- Fix watch cache filtering (#29046, @liggitt)

## v1.3.0

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	88249c443d438666928379aa7fe9275f389aef2ca3ff5db63456ca9eccc	9275f389aef2ca3ff5db63456ca9eccc

## Highlights

- Authorization:
  - **Alpha** RBAC authorization API group
- Federation
  - federation api group is now **beta**
  - Services from all federated clusters are now registered in Cloud DNS (AWS and GCP).
- Stateful Apps:
  - **alpha** PetSets manage stateful apps
  - **alpha** Init containers provide one-time setup for stateful containers
- Updating:
  - Retry Pod/RC updates in kubectl rolling-update.
  - Stop ‘kubectl drain’ deleting pods with local storage.
  - Add **kubectl rollout status**
- Security/Auth
  - L7 LB controller and disk attach controllers run on master, so nodes do not need those privileges.
  - Setting TLS1.2 minimum
  - **kubectl create secret tls** command
  - Webhook Token Authenticator
  - **beta** PodSecurityPolicy objects limits use of security-sensitive features by pods.
- Kubectl
  - Display line number on JSON errors

- Add flag `-t` as shorthand for `-tty`
- Resources
  - Improved node stability by *optionally* evicting pods upon memory pressure - Design Doc
  - **alpha**: NVIDIA GPU support (#24836, @therec)
  - Adding loadBalancer services and nodeports services to quota system

## Known Issues and Important Steps before Upgrading

The following versions of Docker Engine are supported - *v1.10*, *v1.11* Although *v1.9* is still compatible, we recommend upgrading to one of the supported versions. All prior versions of docker will not be supported.

**ThirdPartyResource** If you use ThirdPartyResource objects, they have moved from being namespaced-scoped to be cluster-scoped. Before upgrading to 1.3.0, export and delete any existing ThirdPartyResource objects using a 1.2.x client:

```
kubectl get thirdpartyresource --all-namespaces -o yaml > tprs.yaml
kubectl delete -f tprs.yaml
```

After upgrading to 1.3.0, re-register the third party resource objects at the root scope (using a 1.3 server and client):

```
kubectl create -f tprs.yaml
```

**kubect1** Kubect1 flag `--container-port` flag is deprecated: it will be removed in the future, please use `--target-port` instead.

## kubernetes Core Known Issues

- Kube Proxy crashes infrequently due to a docker bug (#24000)
  - This issue can be resolved by restarting docker daemon
- CORS works only in insecure mode (#24086)
- Persistent volume claims gets added incorrectly after being deleted under stress. Happens very infrequently. (#26082)

## Docker runtime Known Issues

- Kernel crash with Aufs storage driver on Debian Jessie (#27885)
  - Consider running the *new* kubernetes node problem detector to identify this (and other) kernel issues automatically.
- File descriptors are leaked in docker v1.11 (#275)
- Additional memory overhead per container in docker v1.11 (#21737)
- List of upstream fixes for docker v1.10 identified by RedHat

## Rkt runtime Known Issues

- A detailed list of known issues can be found [here](#)

*More Instructions coming soon*

## Provider-specific Notes

- AWS
  - Support for ap-northeast-2 region (Seoul)
  - Allow cross-region image pulling with ECR
  - More reliable kube-up/kube-down
  - Enable ICMP Type 3 Code 4 for ELBs
  - ARP caching fix
  - Use /dev/xvdXX names
  - ELB:
    - \* ELB proxy protocol support
    - \* mixed plaintext/encrypted ports support in ELBs
    - \* SSL support for ELB listeners
  - Allow VPC CIDR to be specified (experimental)
  - Fix problems with >2 security groups
- GCP:
  - Enable using gcr.io as a Docker registry mirror.
  - Make bigger master root disks in GCE for large clusters.
  - Change default clusterCIDRs from /16 to /14 allowing 1000 Node clusters by default.
  - Allow Debian Jessie on GCE.
  - Node problem detector addon pod detects and reports kernel deadlocks.
- OpenStack
  - Provider added.
- VSphere:
  - Provider updated.

## Previous Releases Included in v1.3.0

- v1.3.0-beta.3
- v1.3.0-beta.2
- v1.3.0-beta.1
- v1.3.0-alpha.5
- v1.3.0-alpha.4
- v1.3.0-alpha.3
- v1.3.0-alpha.2
- v1.3.0-alpha.1

## v1.3.0-beta.3

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	9d18964a294f356bfdc841957de45ffcf15664913	ed132663967876dd6

### Changelog since v1.3.0-beta.2

#### Action Required

- [kubelet] Allow opting out of automatic cloud provider detection in kubelet. By default kubelet will auto-detect cloud providers (#28258, @vishh)
- If you use one of the kube-dns replication controller manifest in `cluster/saltbase/salt/kube-dns`, i.e. `cluster/saltbase/salt/kube-dns/{skydns-rc.yaml.base,s`, either substitute one of `__PILLAR__FEDERATIONS__DOMAIN__MAP__` or `{{ pillar['federations_domain_map'] }}` with the corresponding federation name to domain name value or remove them if you do not support cluster federation at this time. If you plan to substitute the parameter with its value, here is an example for `{{ pillar['federations_domain_map'] }}` (#28132, @madhusudancs)
  - `pillar['federations_domain_map'] = “-federations=myfederation=federation.test”`
  - where `myfederation` is the name of the federation and `federation.test` is the domain name registered for the federation.
- federation: Upgrading the groupversion to v1beta1 (#28186, @nikhiljindal)
- Set Dashboard UI version to v1.1.0 (#27869, @bryk)

#### Other notable changes

- Build: Add `KUBE_GCS_RELEASE_BUCKET_MIRROR` option to `push-ci-build.sh` (#28172, @zmerlynn)
- Image GC logic should compensate for reserved blocks (#27996, @ronnielai)
- Bump minimum API version for docker to 1.21 (#27208, @yujuhong)
- Adding lock files for kubeconfig updating (#28034, @krousey)
- federation service controller: fixing the logic to update DNS records (#27999, @quinton-hoole)
- federation: Updating KubeDNS to try finding a local service first for federation query (#27708, @nikhiljindal)
- Support journal logs in fluentd-gcp on GCI (#27981, @a-robinson)
- Copy and display source location prominently on Kubernetes instances (#27985, @maisem)
- Federation e2e support for AWS (#27791, @colhom)

- Copy and display source location prominently on Kubernetes instances (#27840, @zmerlynn)
- AWS/GCE: Spread PetSet volume creation across zones, create GCE volumes in non-master zones (#27553, @justinsb)
- GCE provider: Create TargetPool with 200 instances, then update with rest (#27829, @zmerlynn)
- Add sources to server tarballs. (#27830, @david-mcmahon)
- Retry Pod/RC updates in kubectrl rolling-update (#27509, @janetkuo)
- AWS kube-up: Authorize route53 in the IAM policy (#27794, @justinsb)
- Allow conformance tests to run on non-GCE providers (#26932, @aaron-levy)
- AWS kube-up: move to Docker 1.11.2 (#27676, @justinsb)
- Fixed an issue that Deployment may be scaled down further than allowed by maxUnavailable when minReadySeconds is set. (#27728, @janetkuo)

## v1.3.0-beta.2

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	9c95762970b943d6c6547f0841d1c9c47560424453b2313317b15910bee7	9c95762970b943d6c6547f0841d1c9c47560424453b2313317b15910bee7

## Changes since v1.3.0-beta.1

### Experimental Features

- Init containers enable pod authors to perform tasks before their normal containers start. Each init container is started in order, and failing containers will prevent the application from starting. (#23666, @smarterclayton)

### Other notable changes

- GCE provider: Limit Filter calls to regexps rather than large blobs (#27741, @zmerlynn)
- Show LASTSEEN, the sorting key, as the first column in `kubectrl get event` output (#27549, @therc)
- GCI: fix kubectrl permission issue #27643 (#27740, @andyzheng0831)
- Add federation api and cm servers to hyperkube (#27586, @colhom)
- federation: Creating kubeconfig files to be used for creating secrets for clusters on aws and gke (#27332, @nikhiljindal)
- AWS: Enable ICMP Type 3 Code 4 for ELBs (#27677, @justinsb)
- Bumped Heapster to v1.1.0. (#27542, @piosz)

- More details about the release <https://github.com/kubernetes/heapster/releases/tag/v1.1.0>
- Deleting federation-push.sh (#27400, @nikhiljindal)
- Validate-cluster finishes shortly after at most `ALLOWED_NOTREADY_NODE...` (#26778, @gmarek)
- AWS kube-down: Issue warning if VPC not found (#27518, @justinsb)
- gce/kube-down: Parallelize IGM deletion, batch more (#27302, @zmerlynn)
- Enable dynamic allocation of heapster/eventer cpu request/limit (#27185, @gmarek)
- ‘kubectrl describe pv’ now shows events (#27431, @jsafrane)
- AWS kube-up: set `net.ipv4.neigh.default.gc_thresh1=0` to avoid ARP over-caching (#27682, @justinsb)
- AWS volumes: Use `/dev/xvdXX` names with EC2 (#27628, @justinsb)
- Add a test config variable to specify desired Docker version to run on GCI. (#26813, @wonderfly)
- Check for `thin_is` binary in path for devicemapper when using ThinPool-Watcher and fix uint64 overflow issue for CPU stats (#27591, @dchen1107)
- Change default value of deleting-pods-burst to 1 (#27606, @gmarek)
- MESOS: fix race condition in contrib/mesos/pkg/queue/delay (#24916, @jdef)
- including federation binaries in the list of images we push during release (#27396, @nikhiljindal)
- fix `updatePod()` of RS and RC controllers (#27415, @caesarxuchao)
- Change default value of deleting-pods-burst to 1 (#27422, @gmarek)
- A new volume manager was introduced in kubelet that synchronizes volume mount/unmount (and attach/detach, if attach/detach controller is not enabled). (#26801, @saad-ali)
  - This eliminates the race conditions between the pod creation loop and the orphaned volumes loops. It also removes the unmount/detach from the `syncPod()` path so volume clean up never blocks the `syncPod` loop.

## v1.3.0-beta.1

Documentation & Examples

## Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	2b54995ee8f52d78dc31c3d729f4822a54834147ae4ebee1d295470be8f	14822a54834147ae4ebee1d295470be8f

## Changes since v1.3.0-alpha.5

### Action Required

- Fixing logic to generate ExternalHost in genericapiserver (#26796, @nikhiljindal)
- federation: Updating federation-controller-manager to use secret to get federation-apiserver's kubeconfig (#26819, @nikhiljindal)

### Other notable changes

- federation: fix dns provider initialization issues (#27252, @mfanjie)
- Updating federation up scripts to work in non e2e setup (#27260, @nikhiljindal)
- version bump for gci to milestone 53 (#27210, @adityakali)
- kubectl apply: retry applying a patch if a version conflict error is encountered (#26557, @AdoHe)
- Revert “Wait for arc.getArchive() to complete before running tests” (#27130, @pwittrock)
- ResourceQuota BestEffort scope aligned with Pod level QoS (#26969, @derekwaynecarr)
- The AWS cloudprovider will cache results from DescribeInstances() if the set of nodes hasn't changed (#26900, @therec)
- GCE provider: Log full contents of long operations (#26962, @zmerlynn)
- Fix system container detection in kubelet on systemd. (#26586, @derekwaynecarr)
  - This fixed environments where CPU and Memory Accounting were not enabled on the unit that launched the kubelet or docker from reporting the root cgroup when monitoring usage stats for those components.
- New default horizontalpodautoscaler/v1 generator for kubectl autoscale. (#26775, @piosz)
  - Use autoscaling/v1 in kubectl by default.
- federation: Adding dnsprovider flags to federation-controller-manager (#27158, @nikhiljindal)
- federation service controller: fixing a bug so that existing services are created in newly registered clusters (#27028, @mfanjie)
- Rename environment variables (KUBE\_)ENABLE\_NODE\_AUTOSCALER to (KUBE\_)ENABLE\_CLUSTER\_AUTOSCALER. (#27117, @mwielgus)
- support for mounting local-ssds on GCI (#27143, @adityakali)
- AWS: support mixed plaintext/encrypted ports in ELBs via service.beta.kubernetes.io/aws-load-balancer-ssl-ports annotation (#26976, @therec)
- Updating e2e docs with instructions on running federation tests (#27072, @colhom)
- LBaaS v2 Support for Openstack Cloud Provider Plugin (#25987, @dag-

nello)

- GCI: add support for network plugin (#27027, @andyzheng0831)
- Bump cAdvisor to v0.23.3 (#27065, @timstclair)
- Stop 'kubectldrain' deleting pods with local storage. (#26667, @mml)
- Networking e2es: Wait for all nodes to be schedulable in kubeproxy and networking tests (#27008, @zmerlynn)
- change clientset of service controller to versioned (#26694, @mfanjie)
- Use gcr.io as a Docker registry mirror when setting up a cluster in GCE. (#25841, @ojarjur)
- correction on rbd volume object and defaults (#25490, @rootfs)
- Bump GCE debian image to container-v1-3-v20160604 (#26851, @zmerlynn)
- Option to enable http2 on client connections. (#25280, @timothysc)
- kubectld get ingress output remove rules (#26684, @AdoHe)
- AWS kube-up: Remove SecurityContextDeny admission controller (to mirror GCE) (#25381, @zquestz)
- Fix third party (#25894, @brendandburns)
- AWS Route53 dnsprovider (#26049, @quinton-hoole)
- GCI/Trusty: support the Docker registry mirror (#26745, @andyzheng0831)
- Kubernetes v1.3 introduces a new Attach/Detach Controller. This controller manages attaching and detaching of volumes on-behalf of nodes. (#26351, @saad-ali)
  - This ensures that attachment and detachment of volumes is independent of any single nodes' availability. Meaning, if a node or kubelet becomes unavailable for any reason, the volumes attached to that node will be detached so they are free to be attached to other nodes.
  - Specifically the new controller watches the API server for scheduled pods. It processes each pod and ensures that any volumes that implement the volume Attacher interface are attached to the node their pod is scheduled to.
  - When a pod is deleted, the controller waits for the volume to be safely unmounted by kubelet. It does this by waiting for the volume to no longer be present in the nodes Node.Status.VolumesInUse list. If the volume is not safely unmounted by kubelet within a pre-configured duration (3 minutes in Kubernetes v1.3), the controller unilaterally detaches the volume (this prevents volumes from getting stranded on nodes that become unavailable).
  - In order to remain backwards compatible, the new controller only manages attach/detach of volumes that are scheduled to nodes that opt-in to controller management. Nodes running v1.3 or higher of Kubernetes opt-in to controller management by default by setting the "volumes.kubernetes.io/controller-managed-attach-detach" annotation on the Node object on startup. This behavior is gated by a new kubelet flag, "enable-controller-attach-detach," (default true).
  - In order to safely upgrade an existing Kubernetes cluster without interruption of volume attach/detach logic:



- \* First upgrade the master to Kubernetes v1.3.
  - This will start the new attach/detach controller.
  - The new controller will initially ignore volumes for all nodes since they lack the “volumes.kubernetes.io/controller-managed-attach-detach” annotation.
- \* Then upgrade nodes to Kubernetes v1.3.
  - As nodes are upgraded, they will automatically, by default, opt-in to attach/detach controller management, which will cause the controller to start managing attaches/detaches for volumes that get scheduled to those nodes.
- Added DNS Reverse Record logic for service IPs (#26226, @ArtfulCoder)
- read gluster log to surface glusterfs plugin errors properly in describe events (#24808, @screeley44)

## v1.3.0-alpha.5

Documentation & Examples

## Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	724bf5a4437ca9dc75d9297382247b145297d536	247b145297d536007fce69f1e344fd87e

## Changes since v1.3.0-alpha.4

### Action Required

- Add direct serializer (#26251, @caesarxuchao)
- Add a NodeCondition “NetworkUnavailable” to prevent scheduling onto a node until the routes have been created (#26415, @wojtekt-t)
- Add garbage collector into kube-controller-manager (#26341, @caesarxuchao)
- Add orphaning finalizer logic to GC (#25599, @caesarxuchao)
- GCI-backed masters mount srv/kubernetes and srv/sshproxy in the right place (#26238, @ihmccreery)
- Updaing QoS policy to be at the pod level (#14943, @vishh)
- add CIDR allocator for NodeController (#19242, @mqliang)
- Adding garbage collector controller (#24509, @caesarxuchao)

### Other notable changes

- Fix a bug with pluralization of third party resources (#25374, @brendand-burns)
- Run l7 controller on master (#26048, @bprashanth)

- AWS: ELB proxy protocol support via annotation service.beta.kubernetes.io/aws-load-balancer-proxy-protocol (#24569, @williamsandrew)
- kubectl run --restart=Never creates pods (#25253, @soltys)
- Add LabelSelector to PersistentVolumeClaimSpec (#25917, @pmorie)
- Removed metrics api group (#26073, @piosz)
- Fixed check in kubectl autoscale: cpu consumption can be higher than 100%. (#26162, @jszczepkowski)
- Add support for 3rd party objects to kubectl label (#24882, @brendandburns)
- Move shell completion generation into 'kubectl completion' command (#23801, @sttts)
- Fix strategic merge diff list diff bug (#26418, @AdoHe)
- Setting TLS1.2 minimum because TLS1.0 and TLS1.1 are vulnerable (#26169, @victorgp)
- Kubelet: Periodically reporting image pulling progress in log (#26145, @Random-Liu)
- Federation service controller is one key component of federation controller manager, it watches federation service, creates/updates services to all registered clusters, and update DNS records to global DNS server. (#26034, @mfanjie)
- Stabilize map order in kubectl describe (#26046, @timoreimann)
- Google Cloud DNS dnsprovider - replacement for #25389 (#26020, @quinton-hoole)
- Fix system container detection in kubelet on systemd. (#25982, @derek-waynecarr)
  - This fixed environments where CPU and Memory Accounting were not enabled on the unit that launched the kubelet or docker from reporting the root cgroup when monitoring usage stats for those components.
- Added pods-per-core to kubelet. #25762 (#25813, @rrati)
- promote sourceRange into service spec (#25826, @freehan)
- kube-controller-manager: Add configure-cloud-routes option (#25614, @justinsb)
- kubelet: reading cloudinfo from cadvisor (#21373, @enoodle)
- Disable cAdvisor event storage by default (#24771, @timstclair)
- Remove docker-multinode (#26031, @luxas)
- nodecontroller: Fix log message on successful update (#26207, @zmerlynn)
- remove deprecated generated typed clients (#26336, @caesarxuchao)
- Kubenet host-port support through iptables (#25604, @freehan)
- Add metrics support for a GCE PD, EC2 EBS & Azure File volumes (#25852, @vishh)
- Bump cAdvisor to v0.23.2 - See changelog for details (#25914, @timstclair)
- Alpha version of "Role Based Access Control" API. (#25634, @ericchiang)
- Add Seccomp API (#25324, @jfrazelle)
- AWS: Fix long-standing bug in stringSetToPointers (#26331, @therc)
- Add dnsmasq as a DNS cache in kube-dns pod (#26114, @ArtfulCoder)

- routecontroller: Add wait.NonSlidingUntil, use it (#26301, @zmerlynn)
- Attempt 2: Bump GCE containerVM to container-v1-3-v20160517 (Docker 1.11.1) again. (#26001, @dchen1107)
- Downward API implementation for resources limits and requests (#24179, @aveshagarwal)
- GCE clusters start using GCI as the default OS image for masters (#26197, @wonderfly)
- Add a 'kubectl clusterinfo dump' option (#20672, @brendandburns)
- Fixing heapster memory requirements. (#26109, @Q-Lee)
- Handle federated service name lookups in kube-dns. (#25727, @madhusudancs)
- Support sort-by timestamp in kubectl get (#25600, @janetkuo)
- vSphere Volume Plugin Implementation (#24947, @abithap)
- ResourceQuota controller uses rate limiter to prevent hot-loops in error situations (#25748, @derekwaynecarr)
- Fix hyperkube flag parsing (#25512, @colhom)
- Add a kubectl create secret tls command (#24719, @bprashanth)
- Introduce a new add-on pod NodeProblemDetector. (#25986, @Random-Liu)
  - NodeProblemDetector is a DaemonSet running on each node, monitoring node health and reporting node problems as NodeCondition and Event. Currently it already supports kernel log monitoring, and will support more problem detection in the future. It is enabled by default on gce now.
- Handle cAdvisor partial failures (#25933, @timstclair)
- Use SkyDNS as a library for a more integrated kube DNS (#23930, @ArtfulCoder)
- Introduce node memory pressure condition to scheduler (#25531, @ingvagabund)
- Fix detection of docker cgroup on RHEL (#25907, @ncdc)
- Kubelet evicts pods when available memory falls below configured eviction thresholds (#25772, @derekwaynecarr)
- Use protobufs by default to communicate with apiserver (still store JSONs in etcd) (#25738, @wojtek-t)
- Implement NetworkPolicy v1beta1 API object / client support. (#25638, @caseydavenport)
- Only expose top N images in NodeStatus (#25328, @resouer)
- Extend secrets volumes with path control (#25285, @ingvagabund)
- With this PR, kubectl and other RestClient's using the AuthProvider framework can make OIDC authenticated requests, and, if there is a refresh token present, the tokens will be refreshed as needed. (#25270, @bobbyrullo)
- Make addon-manager cross-platform and use it with hyperkube (#25631, @luxas)
- kubelet: Optionally, have kubelet exit if lock file contention is observed, using -exit-on-lock-contention flag (#25596, @derekparker)

- Bump up glbc version to 0.6.2 (#25446, @bprashanth)
- Add “kubectl set image” for easier updating container images (for pods or resources with pod templates). (#25509, @janetkuo)
- NodeController doesn’t evict Pods if no Nodes are Ready (#25571, @gmarek)
- Incompatible change of kube-up.sh: (#25734, @jszczepkowski)
  - When turning on cluster autoscaler by setting KUBE\_ENABLE\_NODE\_AUTOSCALER=true, KUBE\_AUTOSCALER\_MAX\_NODES need to be set.
- systemd node spec proposal (#17688, @derekwaynecarr)
- Bump GCE ContainerVM to container-v1-3-v20160517 (Docker 1.11.1) (#25843, @zmerlynn)
- AWS: Move enforcement of attached AWS device limit from kubelet to scheduler (#23254, @jsafrane)
- Refactor persistent volume controller (#24331, @jsafrane)
- Add support for running GCI on the GCE cloud provider (#25425, @andyzheng0831)
- Implement taints and tolerations (#24134, @kevin-wangzefeng)
- Add init containers to pods (#23567, @smarterclayton)

## v1.3.0-alpha.4

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	758e97e7e50153840379ecd9f84d18a69542539f	4e18a69542539f1cc30e2137d7c41854

## Changes since v1.3.0-alpha.3

### Action Required

- validate third party resources (#25007, @liggitt)
- Automatically create the kube-system namespace (#25196, @luxas)
- Make ThirdPartyResource a root scoped object (#25006, @liggitt)
- mark container-port flag as deprecated (#25072, @AdoHe)
- Provide flags to use etcd3 backed storage (#24455, @hongchaodeng)

### Other notable changes

- Fix hyperkube’s layer caching, and remove –make-symlinks at build time (#25693, @luxas)
- AWS: More support for ap-northeast-2 region (#24464, @matthewrudy)
- Make bigger master root disks in GCE for large clusters (#25670, @gmarek)

- AWS kube-down: don't fail if ELB not in VPC - #23784 (#23785, @ajohnstone)
- Build hyperkube in hack/local-up-cluster instead of separate binaries (#25627, @luxas)
- enable recursive processing in kubectl rollout (#25110, @metral)
- Support struct,array,slice types when sorting kubectl output (#25022, @zhouhaibing089)
- federated api servers: Adding a discovery summarizer server (#20358, @nikhiljindal)
- AWS: Allow cross-region image pulling with ECR (#24369, @therec)
- Automatically add node labels beta.kubernetes.io/{os,arch} (#23684, @luxas)
- kubectl "rm" will suggest using "delete"; "ps" and "list" will suggest "get". (#25181, @janetkuo)
- Add IPv6 address support for pods - does NOT include services (#23090, @tgraf)
- Use local disk for ConfigMap volume instead of tmpfs (#25306, @pmorie)
- Alpha support for scheduling pods on machines with NVIDIA GPUs whose kubelets use the `--experimental-nvidia-gpus` flag, using the `alpha.kubernetes.io/nvidia-gpu` resource (#24836, @therec)
- AWS: SSL support for ELB listeners through annotations (#23495, @therec)
- Implement `kubectl rollout status` that can be used to watch a deployment's rollout status (#19946, @janetkuo)
- Webhook Token Authenticator (#24902, @cjcullen)
- Update PodSecurityPolicy types and add admission controller that could enforce them (#24600, @pweil-)
- Introducing ScheduledJobs as described in the proposal as part of `batch/v2alpha1` version (experimental feature). (#24970, @soltys)
- kubectl now supports validation of nested objects with different ApiGroups (e.g. objects in a List) (#25172, @pwittrock)
- Change default clusterCIDRs from /16 to /14 in GCE configs allowing 1000 Node clusters by default. (#25350, @gmarek)
- Add 'kubectl set' (#25444, @janetkuo)
- vSphere Cloud Provider Implementation (#24703, @dagnello)
- Added JobTemplate, a preliminary step for ScheduledJob and Workflow (#21675, @soltys)
- Openstack provider (#21737, @zreigz)
- AWS kube-up: Allow VPC CIDR to be specified (experimental) (#23362, @miguelfrde)
- Return "410 Gone" errors via watch stream when using watch cache (#25369, @liggitt)
- GKE provider: Add cluster-ipv4-cidr and arbitrary flags (#25437, @zmerlynn)
- AWS kube-up: Increase timeout waiting for docker start (#25405, @justinsb)
- Sort resources in quota errors to avoid duplicate events (#25161, @derek-

- waynecarr)
- Display line number on JSON errors (#25038, @mfojtik)
- If the cluster node count exceeds the GCE TargetPool maximum (currently 1000), (#25178, @zmerlynn)
  - randomly select which nodes are members of Kubernetes External Load Balancers.
- Clarify supported version skew between masters, nodes, and clients (#25087, @ihmccreery)
- Move godeps to vendor/ (#24242, @thockin)
- Introduce events flag for describers (#24554, @ingvagabund)
- run kube-addon-manager in a static pod (#23600, @mikedanese)
- Reimplement ‘pause’ in C - smaller footprint all around (#23009, @uluyol)
- Add subPath to mount a child dir or file of a volumeMount (#22575, @MikaelCluseau)
- Handle image digests in node status and image GC (#25088, @ncdc)
- PLEG: reinspect pods that failed prior inspections (#25077, @ncdc)
- Fix kubectrl create secret/configmap to allow = values (#24989, @derek-waynecarr)
- Upgrade installed packages when building hyperkube to improve the security profile (#25114, @aaronlevy)
- GCI/Trusty: Support ABAC authorization (#24950, @andyzheng0831)
- fix cinder volume dir umount issue #24717 (#24718, @chengyli)
- Inter pod topological affinity and anti-affinity implementation (#22985, @kevin-wangzefeng)
- start etcd compactor in background (#25010, @hongchaodeng)
- GCI: Add two GCI specific metadata pairs (#25105, @andyzheng0831)
- Ensure status is not changed during an update of PV, PVC, HPA objects (#24924, @mqliang)
- GCE: Prefer preconfigured node tags for firewalls, if available (#25148, @a-robinson)
- kubectrl rolling-update support for same image (#24645, @jlowdermilk)
- Add an entry to the salt config to allow Debian jessie on GCE. (#25123, @jlewi)
  - As with the existing Wheezy image on GCE, docker is expected to already be installed in the image.
- Mark kube-push.sh as broken (#25095, @ihmccreery)
- AWS: Add support for ap-northeast-2 region (Seoul) (#24457, @leokhoa)
- GCI: Update the command to get the image (#24987, @andyzheng0831)
- Port-forward: use out and error streams instead of glog (#17030, @csrwn)
- Promote Pod Hostname & Subdomain to fields (were annotations) (#24362, @ArtfulCoder)
- Validate deletion timestamp doesn’t change on update (#24839, @liggitt)
- Add flag -t as shorthand for -tty (#24365, @janetkuo)
- Add support for running clusters on GCI (#24893, @andyzheng0831)
- Switch to ABAC authorization from AllowAll (#24210, @cjcullen)
- Fix DeletingLoadBalancer event generation. (#24833, @a-robinson)

## v1.3.0-alpha.3

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	01e0dc68653173614dc99f44875a122478f339638	5172478f33963843d21daa17683e0288

### Changes since v1.3.0-alpha.2

#### Action Required

- Updating go-restful to generate “type”:“object” instead of “type”:“any” in swagger-spec (breaks kubectl 1.1) (#22897, @nikhiljindal)
- Make watch cache treat resourceVersion consistent with uncached watch (#24008, @liggitt)

#### Other notable changes

- Trusty: Add retry in curl commands (#24749, @andyzheng0831)
- Collect and expose runtime’s image storage usage via Kubelet’s /stats/summary endpoint (#23595, @vishh)
- Adding loadBalancer services to quota system (#24247, @sdminonne)
- Enforce --max-pods in kubelet admission; previously was only enforced in scheduler (#24674, @gmarek)
- All clients under ClientSet share one RateLimiter. (#24166, @gmarek)
- Remove requirement that Endpoints IPs be IPv4 (#23317, @aanm)
- Fix unintended change of Service.spec.ports[].nodePort during kubectl apply (#24180, @AdoHe)
- Don’t log private SSH key (#24506, @timstclair)
- Incremental improvements to kubelet e2e tests (#24426, @pwittrock)
- Bridge off-cluster traffic into services by masquerading. (#24429, @cjcullen)
- Flush conntrack state for removed/changed UDP Services (#22573, @freehan)
- Allow setting the Host header in a httpGet probe (#24292, @errm)
- Fix goroutine leak in ssh-tunnel healthcheck. (#24487, @cjcullen)
- Fix gce.getDiskByNameUnknownZone logic. (#24452, @a-robinson)
- Make etcd cache size configurable (#23914, @jsravn)
- Drain pods created from ReplicaSets in ‘kubectl drain’ (#23689, @maclof)
- Make kubectl edit not convert GV on edits (#23437, @DirectXMan12)
- don’t ship kube-registry-proxy and pause images in tars. (#23605, @mikedanese)
- Do not throw creation errors for containers that fail immediately after being started (#23894, @vishh)

- Add a client flag to delete “-now” for grace period 0 (#23756, @smarter-clayton)
- add act-as powers (#23549, @deads2k)
- Build Kubernetes, etcd and flannel for arm64 and ppc64le (#23931, @luxas)
- Honor starting resourceVersion in watch cache (#24208, @ncdc)
- Update the pause image to build for arm64 and ppc64le (#23697, @luxas)
- Return more useful error information when a persistent volume fails to mount (#23122, @screeley44)
- Trusty: Avoid unnecessary in-memory temp files (#24144, @andyzheng0831)
- e2e: fix error checking in kubelet stats (#24205, @yujuhong)
- Fixed mounting with containerized kubelet (#23435, @jsafrane)
- Adding nodeports services to quota (#22154, @sdminonne)
- e2e: adapt kubelet\_perf.go to use the new summary metrics API (#24003, @yujuhong)
- kubelet: add RSS memory to the summary API (#24015, @yujuhong)

## v1.3.0-alpha.2

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	305c8c2af7e99d463dbbe4208eaf2b575366759669212008f8fda628c0	af2b575366759669212008f8fda628c0

## Changes since v1.3.0-alpha.1

### Other notable changes

- Make kube2sky and skydns docker images cross-platform (#19376, @luxas)
- Allowing type object in kubectrl swagger validation (#24054, @nikhiljindal)
- Fix TerminationMessagePath (#23658, @Random-Liu)
- Trusty: Do not create the docker-daemon cgroup (#23996, @andyzheng0831)
- Make ConfigMap volume readable as non-root (#23793, @pmorie)
- only include running and pending pods in daemonset should place calculation (#23929, @mikedanese)
- Upgrade to golang 1.6 (#22149, @luxas)
- Cross-build hyperkube and debian-iptables for ARM. Also add a flannel image (#21617, @luxas)
- Add a timeout to the sshDialer to prevent indefinite hangs. (#23843, @cjcullen)
- Ensure object returned by volume getCloudProvider incorporates cloud config (#23769, @saad-ali)
- Update Dashboard UI addon to v1.0.1 (#23724, @maciaszczykm)



- Add zsh completion for kubectl (#23797, @sttts)
- AWS kube-up: tolerate a lack of ephemeral volumes (#23776, @justinsb)
- duplicate kube-apiserver to federated-apiserver (#23509, @jianhuiz)
- Kubelet: Start using the official docker engine-api (#23506, @Random-Liu)
- Fix so setup-files don't recreate/invalidate certificates that already exist (#23550, @luxas)
- A pod never terminated if a container image registry was unavailable (#23746, @derekwaynecarr)
- Fix jsonpath to handle maps with key of nonstring types (#23358, @ave-shagarwal)
- Trusty: Regional release .tar.gz support (#23558, @andyzheng0831)
- Add support for 3rd party objects to kubectl (#18835, @brendandburns)
- Remove unnecessary override of /etc/init.d/docker on containervm image. (#23593, @dchen1107)
- make docker-checker more robust (#23662, @ArtfulCoder)
- Change kube-proxy & fluentd CPU request to 20m/80m. (#23646, @cjcullen)
- Create a new Deployment in kube-system for every version. (#23512, @Q-Lee)
- IngressTLS: allow secretName to be blank for SNI routing (#23500, @tam7t)
- don't sync deployment when pod selector is empty (#23467, @mikedanese)
- AWS: Fix problems with >2 security groups (#23340, @justinsb)

## v1.3.0-alpha.1

Documentation & Examples

### Downloads

binary	sha1 hash	md5 hash
kubernetes.tar.gz	e0041b08e220a4704ea2ad90a67b528f2220ea245	7b528f2220ea24578f72a8d1f43a12098

## Changes since v1.2.0

### Action Required

- Disabling swagger ui by default on apiserver. Adding a flag that can enable it (#23025, @nikhiljindal)
- restore ability to run against secured etcd (#21535, @AdoHe)

### Other notable changes

- validate that daemonsets don't have empty selectors on creation (#23530, @mikedanese)

- Trusty: Update heapster manifest handling code (#23434, @andyzheng0831)
- Support differentiation of OS distro in e2e tests (#23466, @andyzheng0831)
- don't sync daemonsets with selectors that match all pods (#23223, @mikedanese)
- Trusty: Avoid reaching GCE custom metadata size limit (#22818, @andyzheng0831)
- Update kubectrl help for 1.2 resources (#23305, @janetkuo)
- Support addon Deployments, make heapster a deployment with a nanny. (#22893, @Q-Lee)
- Removing URL query param from swagger UI to fix the XSS issue (#23234, @nikhiljindal)
- Fix hairpin mode (#23325, @MurgaNikolay)
- Bump to container-vm-v20160321 (#23313, @zmerlynn)
- Remove the restart-kube-proxy and restart-apiserver functions (#23180, @roberthbailey)
- Copy annotations back from RS to Deployment on rollback (#23160, @janetkuo)
- Trusty: Support hybrid cluster with nodes on ContainerVM (#23079, @andyzheng0831)
- update expose command description to add deployment (#23246, @AdoHe)
- Add a rate limiter to the GCE cloudprovider (#23019, @alex-mohr)
- Add a Deployment example for kubectrl expose. (#23222, @madhusudancs)
- Use versioned object when computing patch (#23145, @liggitt)
- kubelet: send all received pods in one update (#23141, @yujuhong)
- Add a SSHKey sync check to the master's healthz (when using SSHTunnels). (#23167, @cjcullen)
- Validate minimum CPU limits to be  $\geq 10m$  (#23143, @vishh)
- Fix controller-manager race condition issue which cause endpoints flush during restart (#23035, @xinxiaogang)
- MESOS: forward globally declared cadvisor housekeeping flags (#22974, @jdef)
- Trusty: support developer workflow on base image (#22960, @andyzheng0831)
- Bumped Heapster to stable version 1.0.0 (#22993, @piosz)
- Deprecating `-api-version` flag (#22410, @nikhiljindal)
- allow resource.version.group in kubectrl (#22853, @deads2k)
- Use SCP to dump logs and parallelize a bit. (#22835, @spxtr)
- update wide option output (#22772, @AdoHe)
- Change scheduler logic from random to round-robin (#22430, @gmarek)

Please see the Releases Page for older releases.

Release notes of older releases can be found in: - CHANGELOG-1.2.md