v1.12.10

Documentation

Downloads for v1.12.10

filename	sha512 hash
kubernetes.tar.gz	fd6b78f7d56bbf5a286dd69a60b9e6987f0a948a527eb180ef4d6f421cf2deb3303a001d4516e461948f
kubernetes-src.tar.gz	6dbefdf9d6a0dd00cc33a7edb0c78fa172a5ae0ee77fa498776c57a04bbaf79dc2cf44ca704c3304c910

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	cdb104ccfb65693ecc7c5284b997c4df99211a0257c362de80baf9bdac70448287785609ac9c4e46b1a22cb
kubernetes-client-darwin-amd64.tar.gz	c53e42e6bb78ab98ed433b3fae17a7529750ed892ed067f5948e1ae16f82991f7321a431ae02a60711ae1c7
kubernetes-client-linux-	4086b9bcdc6547bc6bea7401b7485fb4dc6b58f52d3df4bafe634514b1da21d7fa5dfd4df2ff45031940133

386.tar.gz	
kubernetes-client-linux-amd64.tar.gz	9cf929134740feadcda93982a1958ea40b08fda00f8dd57023c856eac9ab531ddfed6a5922172a23bc1ba6f
kubernetes-client-linux-arm.tar.gz	1e666e3e6a721eb9567f435b9a1c5bf975434c6f0c99fa836cf7a717dee265a4475edbdbfa3b1de7cb6685c
kubernetes-client-linux-arm64.tar.gz	4a5ef1933ada085ac279115de37e40424590610d199eecbc677c3d6b0839d542acf61962a9e51f682adf0dc
kubernetes-client-linux-ppc64le.tar.gz	914829568f7c6b794a971697e1f8517e4a4735f34cabfed6f24a74e64f7c8138fc9159588624886cb10d3d6
kubernetes-client-linux-s390x.tar.gz	022c53aff4d5ba29522ce232ee819838303ebe878a88341d0a354f261384562823e05693eb3de06d8715e7f
kubernetes-client-windows-386.tar.gz	ecee7ddb3dfd88b69412eb4436bcf942f16eb6d5267a23d89816fb81373359073a66b28cac548629d6b3167
kubernetes-client-windows-amd64.tar.gz	0a217ab3c88e222e9b08c934e9b48198bf64a72ae1afcad423be31c610e9c358b0cfb5feca31e6cd3dc731c

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	201ca1af1c4fbecd598a8a6dc0ff5c865e4dab767ec2e768e8100b0c6c450c5ae1ab773aad9e5cdf3f61c15
kubernetes-server-linux-arm.tar.gz	8b525dd9cd5370148d6530dbee000a2979abc8b3e35be09f0414230bb7d21cbb5c58f7dc3abf94b73faa87f
kubernetes-server-linux-arm64.tar.gz	5fef68d53cc72a6d6037e0a9cccfe5b39a2147540a2a8cd2035eaed8bfb87cf8cb165162e087603290c9397
kubernetes-server-linux-ppc64le.tar.gz	e313a69efda244b0144dc1ed4db560741f4fe1cc596275d2ad8c8c041522327c7f2c6314ae930c71cf641ab
kubernetes-server-linux-s390x.tar.gz	e5b5e3c83b049edbbfc21d72f544ae2b6bfc0329f20b5019010ff62f52c1965190cd9810044ed64d1cf3a15

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	198ad9110890c9570e9e59c94d70f869884795f8db888de5db871f3df007a632780ba7638bb98f5678637a4
kubernetes-node-linux-arm.tar.gz	8042ca61e8d01facb5da8896d67daa624cd6fb99023df71bfb0f04919106cc0b1fd317ce5b88f352d1f32c8
kubernetes-node-linux-arm64.tar.gz	89fbf735c54455305d92f24d4678f741ee996da983b4b84c8729c93b4c5fc53ec01d7124bdffa9c7af3f3ee
kubernetes-node-linux-ppc64le.tar.gz	67aa919f32f90bf4caff5be5dafd91e4b4ae215db0d6cf0498a9f2c8de3891fe7c598fc7d61ede5c8a0b82b
kubernetes-node-linux-s390x.tar.gz	a1ed02846485308b34130769099cc0ac8601cc62545f8e6dc26050e2c356c168169df7e9f2f854fe76a0ddf
kubernetes-node-windows-amd64.tar.gz	539896f374082750f107852739292e6e99e2c584271fbb0d37959f588532d319bb441873e206b7072175285

Changelog since v1.12.9

Other notable changes

- Default resourceGroup should be used when the value of annotation azure-load-balancer-resource-group is an empty string. (#79514, @feiskyer)
- fix: retry detach azure disk issue (#78700, @andyzhangx)
  - try to only update vm if detach a non-existing disk when got <200, error> after detach disk operation
- kubeadm: fix a regression related to taints not being applied from JoinConfiguration (#79107, @joerocklin)
- Bump ip-masq-agent version to v2.3.0 to fix vulnerabilities (#77834, @anfernee)
- fix pod stuck issue due to corrupt mnt point in flexvol plugin, call Unmount if PathExists returns any error (#75234, @andyzhangx)
- Fix a string comparison bug in IPVS graceful termination where UDP real servers are not deleted. (#78999, @andrewsykim)
- Resolves spurious rollouts of workload controllers when upgrading the API server from 1.11 -> 1.12 due to incorrect defaulting of an alpha procMount field in pods (#78881, @liggitt)
- IPVS: Disable graceful termination for UDP traffic to solve issues with high number of UDP connections (DNS / syslog in particular) (#77802, @lbernail)
- fix azure retry issue when return 2XX with error (#78298, @andyzhangx)

v1.12.9

Documentation

Downloads for v1.12.9

filename	sha512 hash
kubernetes.tar.gz	27482e1704256927b2c494e933e5e481280350eddbf4858ab8bbf980784630c295e9b8a882e363e2e619
kubernetes-src.tar.gz	654ea2da90e61f9c5f962f2131af2d46452d2f7f629c87edcacdd3b197c0e2ea83fed341cebcfffe4c47

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	809a9e225234cb37748c4f33d8028ca8ac52e12f4459ee710e4969230adf90340b7c245b835b8108e16333b
kubernetes-client-darwin-amd64.tar.gz	660b1ee830c75d0a8b2be611cea0c1fdbd922895f4bfc714d66345c214b63e72528c873b337c03102d7a216
kubernetes-client-linux-386.tar.gz	c663732322edb13f3958766c9e50197d654abe89ce8ca943f35948bd083f89b38b5a59561fac583b826e445
kubernetes-client-linux-amd64.tar.gz	e1c4945644e2434d0938a4a565672143156ceb517618a695f84e92a8bc04f514491323c54e4e53762ad8c61
kubernetes-client-linux-arm.tar.gz	fe9d040544b0880475834d57a5bc4eb2865d391650076ab86d0c73c8d76348c357a083f9eff60e100bf9e40
kubernetes-client-linux-arm64.tar.gz	26d8b699a663f3bd9ffc43b32861a4903f714e2a147c75d2407c0c479bea97ba5fdeeb7570f1554df5be939
kubernetes-client-linux-ppc64le.tar.gz	c4b0f62c3b6418c2efc85c57355461342c97c8032a61d3aa5952cb63e62dd7032546c1a936399e89531bf34
kubernetes-client-linux-s390x.tar.gz	c3ce8e29c6c144e203c15c04414f907a68d89089a8e7f451f80cc2507665abcbfd8ecdedccec466644036ca
kubernetes-client-windows-386.tar.gz	f62e08eba18a94867a595ed5c4256b250cc8fe3a87de9dd1ca8c455704070d17f47a80a11a802fdf94ab61b
kubernetes-client-	0b655afcf05e54c6eb78a3a58f5713a09672a11915129d769e4a1c0d8c6b5ae6301f58efb7a65b115c04d74

windows-amd64.tar.gz	

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	fb5a0f5cd8c06fd8178affe081118db4f11e618c40be251f4348ea241fdde35bec3fdabeb1ac0e99056f64c
kubernetes-server-linux-arm.tar.gz	5c998f415ea8e1b96385d557aca46691f041e98bafa5ad8a4e110f60155b05106dcf313256c7622819145be
kubernetes-server-linux-arm64.tar.gz	9501823b79673b129a7abb5f07700259faee10849da710bf12979468b44e6fda2e93e7f2e77db913edcdad4
kubernetes-server-linux-ppc64le.tar.gz	c4d814fc498923f257c0a96e48d0adbea2487308f269c0e70118de89df4b557b523d507d48bb2432f74235b
kubernetes-server-linux-s390x.tar.gz	dfb06bb352db236ea6763d0237bb1cf6a26c2d04c54b85de19dd6bc096ce93259038123049a32d0efc982e5

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	32017a8f8d47bf4f8ac9507f278bbc814d70a804d1d9b27ffd4ae4c2b9646b34513b7ea972839dabc8d83e0
kubernetes-node-linux-arm.tar.gz	cb2b3563806dc488a2e8b9d54d545b3f4cbad746d38e3d847d5ab5a1b59af10183dc72835fc22557416d2c2
kubernetes-node-linux-arm64.tar.gz	e1bd333c3bd8bad52af1c696eb28ffcc058ba5fd6c554244627de8d9231b69466e33a40132b3e03158dd57b
kubernetes-node-linux-ppc64le.tar.gz	ecf696b8522e1dffa61e00aa3e27aad27135487640f8c58af84ca883827ad568ec96e9eb4ccd2220e43bb3c
kubernetes-node-linux-s390x.tar.gz	e6177729ce9aadc31dd8237f7282cbbe30f6432ab14931310eb6fe892edb126e4ac6e5212b2aa8d2cfd1f00
kubernetes-node-	c2daa564e89d6ec8c5322e3b2b7188ac1cb1091ab7f56121f3017ae8ea334e4b626978b31dbed31f7e9b2b1

windows-amd64.tar.gz	

Changelog since v1.12.8

Other notable changes

- Active watches of custom resources now terminate properly if the CRD is modified. (#78029, @liggitt)
- fix incorrect prometheus azure metrics (#77722, @andyzhangx)
- Fixed a bug in the apiserver storage that could cause just-added finalizers to be ignored on an immediately following delete request, leading to premature deletion. (#77619, @caesarxuchao)
- client-go and kubectl no longer write cached discovery files with world-accessible file permissions (#77874, @yuchengwu)
- Check if container memory stats are available before accessing it (#77656, @yastij)
- Fixes segmentation fault issue with Protobuf library when log entries are deeply nested. (#77224, @qingling128)
- Clean links handling in cp's tar code (#76788, @soltysh)
- [fluentd-gcp addon] Bump fluentd-gcp-scaler to v0.5.2 to pick up security fixes. (#76762, @serathius)
- Fixes an error with stuck informers when an etcd watch receives update or delete events with missing data (#76675, @ryanmcnamara)
- fix azure disk list corruption issue (#77187, @andyzhangx)
- Fixed scanning of failed iSCSI targets. (#74306, @jsafrane)
- fix detach azure disk back off issue which has too big lock in failure retry condition (#76573, @andyzhangx)
- specify azure file share name in azure file plugin (#76988, @andyzhangx)
- [metrics-server addon] Restore connecting to nodes via IP addresses (#76819, @serathius)
- Update Cluster Autoscaler to 1.12.5 (#77063, @losipiuk)
    - https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.12.5
    - https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.12.4

v1.12.8

Documentation

Downloads for v1.12.8

filename	sha512 hash
kubernetes.tar.gz	`0f14f54bcd3ef8260e424ccb9be4d1d7ad8d03e15d00d081fdf564adc319ca4040d404f37466a2342650`
kubernetes-src.tar.gz	`10b6ce78a906effbb38600d8e496c49e9739fffaba8d44eff54d298b0f899481b9e4cc60eb918586f3d1`

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	`bfb3680c47f674773c50c446577eb3f10468a6fd367a2ee7f851d299f4ff04071757962ddff10659b185ab8`

kubernetes-client-darwin-amd64.tar.gz	b6543d97975add3a27f75ff6fcc7c3caeb8749ac88967cb79a6688ba4ba1837fda3582a0f5588073a855a2d
kubernetes-client-linux-386.tar.gz	57358d71b4c19d826e4979b1ef3f33b5b1e05c50ba257d6bbfa8d76f15849ebcba389c55f1be50fdc77a311
kubernetes-client-linux-amd64.tar.gz	55e6c2ec67aa3283e3b6904418b35845fa14f5faaed0cf503a7adb4e52842f7c3aaa5fbbfdbcf508794c784
kubernetes-client-linux-arm.tar.gz	0a7b54f8846ddf9d6ef6df863a0211ab448dfbdeeaf78ec163b4e46fa4d7f92611f71ac757bb00d6dfee631
kubernetes-client-linux-arm64.tar.gz	ad68df3f56c2622a01f54a8575c7cec3b9f508c1332bd16cf3f39b9e3f66dae3b495fc1dce3d69504f18b0f
kubernetes-client-linux-ppc64le.tar.gz	1452011ed3f37984ff9493df0d490eefb8a5c0d84c2f87d9ff47ffe9924a14d918c5dfa755494c05975a10b
kubernetes-client-linux-s390x.tar.gz	edca658d8f91dd4939c6eba444b2b56a30304d3d0c42607e823acf64dace852cc66a8f14d4bf2fc2bdf0c99
kubernetes-client-windows-386.tar.gz	14e5daaf4623d11380b552fc3fa5ad6bf98488dcf365c8cfa8d7f1d26fe73b317e5cfeb3e46f4e9d582e2a0
kubernetes-client-windows-amd64.tar.gz	1a1d4457620daf2f54e11b2ef790f30890bca71502f86a3c0163a4e6a5afb701c3d60511b944eb4b80c9418

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	8d1a70cfa9012282f679d876ae070f7830aad11ef64f437b90320ccae5253a3f527df0abb56f34004ccb211
kubernetes-server-linux-arm.tar.gz	67022706b4bf98aba305fd3759940ce396e35474814ced4152152b4cc536d79e1b4e3a4027e45af3637ea00
kubernetes-server-linux-arm64.tar.gz	00d7e79fa71f4265b8ba5cc2e62c2ab4b5d1076bddc8155a3b7a5e589c34446860c25571b972566e6947092
kubernetes-	8add81c5f767dbdd04ac39f07aa4855be86c91f848c2e331d40734e85d0d6c7ea5cd0c575ab49b101c1e6ba

server-linux-ppc64le.tar.gz	
kubernetes-server-linux-s390x.tar.gz	63e58ea49072ac058e74b989f9a74887b27c52d56923f44a7d53cb384915f4a2425e65d6e9f6642d4fbac10

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	6677af5330149f39c6d84722e5418bf35caf4d431fb97fd0df102373a5faaf4a8344921bc2a51290abe5216
kubernetes-node-linux-arm.tar.gz	aa0f2abaec8ac765acffe1c6ff00c01cd74befba98a5c7afb30f716bd37f9094e1c314df7f3b7c8361c86e6
kubernetes-node-linux-arm64.tar.gz	c4bb230afcf78414461b32cedd0564a58e02e82b0a679ea42f977e3bc501cc4857694774dad423b4a76542a
kubernetes-node-linux-ppc64le.tar.gz	31d4bdc1528ee8d4ab4ee16e3da08c1e8c026eaafd88950836f19e10bf3e87d12876a25e2c90a81529a9d26
kubernetes-node-linux-s390x.tar.gz	d7b8a81b14a12578ca6273dc32703f906627e244ed00639436fb3cb38d4b4aa55d7a857f9a844844bc2d463
kubernetes-node-windows-amd64.tar.gz	9ca9ef41a42d8cb5c15533a10848170fa0f7c1e4eccbc8d6269ce085ab7670e446473e4e240b3bb1905dda3

Changelog since v1.12.7

Other notable changes

- Connections from Pods to Services with 0 endpoints will now ICMP reject immediately, rather than blackhole and timeout. (#72534, @thockin)
- Services of type=LoadBalancer which have no endpoints will now immediately ICMP reject connections, rather than time out. (#74394, @thockin)
- Ensure the backend pools are set correctly for Azure SLB with multiple backend pools (e.g. outbound rules) (#76691, @feiskyer)
- Services of type=LoadBalancer which have no endpoints will now immediately ICMP reject connections, rather than time out. (#74394, @thockin)
- fix race condition issue for smb mount on windows (#75371, @andyzhangx)
- fix smb unmount issue on Windows (#75087, @andyzhangx)
- Increase Azure default maximumLoadBalancerRuleCount to 250. (#72621, @feiskyer)
- Fixes bug in DaemonSetController causing it to stop processing some DaemonSets for 5 minutes after node removal. (#76060, @krzysztof-jastrzebski)

- Fixes a NPD bug on GCI, so that it disables glog writing to files for log-counter (#76211, @wangzhen127)
- [stackdriver addon] Bump prometheus-to-sd to v0.5.0 to pick up security fixes. (#75362, @serathius)
  - [fluentd-gcp addon] Bump fluentd-gcp-scaler to v0.5.1 to pick up security fixes.
  - [fluentd-gcp addon] Bump event-exporter to v0.2.4 to pick up security fixes.
  - [fluentd-gcp addon] Bump prometheus-to-sd to v0.5.0 to pick up security fixes.
  - [metatada-proxy addon] Bump prometheus-to-sd v0.5.0 to pick up security fixes.
- Fixed parsing of fsType in AWS StorageClass parameters (#75944, @jsafrane)
- Node-Problem-Detector configuration is now decoupled from the Kubernetes release on GKE/GCE. (#73288, @wangzhen127)
- [IPVS] Allow for transparent kube-proxy restarts (#75283, @lbernail)

v1.12.7

Documentation

Downloads for v1.12.7

filename	sha512 hash
kubernetes.tar.gz	6fbbaf14e8a24f6ff415068ecc2ad7e0a4103da5d65330e4d01b91d0cb1df0473092eb8982dc584d8b3f
kubernetes-src.tar.gz	67b308e1124b283b1e5da8b0bb03d530868aabd0c30905698ed9be52647cbecab8452bc8392c891a69ba

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	f2b1b6aaaa57989bd21a5969ef86e9bc61115598c1d4587a5117a9040acae965994ed34fc1745417254b7cf
kubernetes-client-darwin-amd64.tar.gz	0967c05e48e06055276323905c29ccfd179d349bccdb03dbe1dd967fce95add2ae698294e6f5260fd4830d7
kubernetes-client-linux-386.tar.gz	e2791a7797d05b6e2885d990364b04fdf39bccda3b092d32e783eb3f60658229adce47dfdbb3480f1d50146
kubernetes-client-linux-amd64.tar.gz	da12d74a4df1dbef4a376ec233114ccc0f1477ad3ced9ca38f26967b3b24c1285924b2ea8b424cbf0af12f8
kubernetes-client-linux-arm.tar.gz	23b4ddebbbfb7488bec894ea98efc77c8c13bdc055713f1d921d82450c01d95fa43c596f7e05eec6aca77b0
kubernetes-client-linux-arm64.tar.gz	f44e343e58b1904ea0a83cb628f09720b1d3c5968474f7115ca16f68a90deaae52ecb3f34b061366f97360a
kubernetes-	8171fcb1aac420083b69d99c73ebf565f178a20ffeb3f1e8243c028efaad566d51e95c24050d4eba792b13e

client-linux-ppc64le.tar.gz	
kubernetes-client-linux-s390x.tar.gz	38b6ebf862e56345d1cf3b16b7ba334e8a12890498c0cbd21ab1202597c4c3bb723abb166af830586888ab4
kubernetes-client-windows-386.tar.gz	dea40564c0abed7959d7e446ed937122d773c365ca2684bc7c856eb2af2ddfecf1f16bc6a349d5c7a1f6dcf
kubernetes-client-windows-amd64.tar.gz	847068332ef5175e8c7a8c9b9850e4b00adea0135729b060632cbeaa69f8ab0fc5f1018f674cf56ca1d2769

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	177185cb67ca546844a188747dc8c4430900911e4d7a46136b869482e8f18c14f0160ff5ae043ebf4baa162
kubernetes-server-linux-arm.tar.gz	5b38eed10d5ff9ded77352de91a4c3628df9f00bda3a8791d14e27db4a286b5f6877a48f20f74f058814d66
kubernetes-server-linux-arm64.tar.gz	bea4118d018c5ca92b8508503cdee6243f73d2c1351a2456de480609d2ddf083a784a099c53d591bc4c2288
kubernetes-server-linux-ppc64le.tar.gz	3424f5a22eb166b2c20393b53ce38e9c42c92a76b48f0032dc0190821f487a5a7f2e75fce9ecdbbfbca9370
kubernetes-server-linux-s390x.tar.gz	52b4b5366c1f3d372c293172136a9051cb9a3297967e009df2675763403a13128466370dbc825f6bd4a44f5

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	da84f9a9a4865efc8ac50c6dcbaf5aedb2206ec3e52cd26e7ea68f202ef466abf0230f0a704a85665eb542b
kubernetes-node-linux-arm.tar.gz	4e6e04eaada99f1c035d5634c50c7f0ae08df96c8aab734efc1f5ae5294bb566fb7c60425219c5b8cc403d3
kubernetes-	94ba017c3c9194d1675a2a9a340934646cbc63bc3e5acd12c0846c9c1cb93370b86d71d25e5424ec0d2212c

node-linux-arm64.tar.gz	
kubernetes-node-linux-ppc64le.tar.gz	78590dda6404e8cfb0a261157081c91fad813cb028b7761fadca42ae192458ad7be49464f624d697524c686
kubernetes-node-linux-s390x.tar.gz	cf61444ef93a0e51b0adc7d67959f70a455ab3eed3a4b62d95aeead14c2c7835d0a3bee70d8cf33c21031cc
kubernetes-node-windows-amd64.tar.gz	01a4e0585375cbe562fc73cf00ac2b87ccbb4f3f62a8977c74f184ba9e53974b451b10b14b574735b9eb40a

Changelog since v1.12.6

Other notable changes

- Kubelet won't evict a static pod with priority `system-node-critical` upon resource pressure. (#74222, @Huang-Wei)
- Re-issue Allocate grpc calls before starting a container that requests device-plugin resources if the cached state is missing. (#73824, @jiayingz)
- Update Cluster Autoscaler version to 1.12.3. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.12.3 (#75182, @losipiuk)
- Restores --username and --password flags to kubectl (#75451, @liggitt)
- Bump debian-iptables image to v11.0.1 to fix security vulnerabilities. (#75077, @grayluck)
- Prevent AWS Network Load Balancer security groups ingress rules to be deleted by ensuring target groups are tagged. (#73594, @masterzen)
- Ensure Azure load balancer cleaned up on 404 or 403 when deleting LoadBalancer services. (#75256, @feiskyer)
- Allow disable outbound SNAT when Azure standard load balancer is used together with outbound rules. (#75282, @feiskyer)
- Fix panic in kubectl cp command (#75037, @soltysh)
- Fix kubelet start failure issue on Azure Stack due to InstanceMetadata setting (#74936, @rjaini)
- fix parse devicePath issue on Azure Disk (#74499, @andyzhangx)
- fix mixed protocol issue for azure load balancer (#74200, @andyzhangx)
- fix issue: fail to detach azure disk when there is server side error (#74398, @andyzhangx)
- fix Azure Container Registry anonymous repo image pull error (#74715, @andyzhangx)
- Fixes an issue with missing apiVersion/kind in object data sent to admission webhooks (#74448, @liggitt)
- fix get azure accounts timeout issue when there is no out-bound IP (#74191, @andyzhangx)
- kubelet: resolved hang/timeout issues when running large numbers of pods with unique configmap/secret references (#74755, @liggitt)
- Reduce memory utilization of admission webhook metrics by removing resource related labels. (#69895, @jpbetz)
- This PR removes the following metrics: (#74636, @logicalhan)
  - reflector_items_per_list
  - reflector_items_per_watch
  - reflector_last_resource_version
  - reflector_list_duration_seconds
  - reflector_lists_total

    - reflector_short_watches_total
    - reflector_watch_duration_seconds
    - reflector_watches_total
    - While this is a backwards-incompatible change, it would have been impossible to setup reliable monitoring around these metrics since the labels were not stable.
- Fix keymutex issues which may crash in some platforms. (#74386, @danielqsj)

v1.12.6

Documentation

Downloads for v1.12.6

filename	sha512 hash
kubernetes.tar.gz	22868d7e1e381944e005ff28de4de2a5bf85047dc724a2e59ee5bf9adf11519c0f619f18523bb3174747
kubernetes-src.tar.gz	a694b53e13d7d559750ca6e4a3274591b30dabe9f5735e60a46e37540fde44d2c965489e52c6dabbf1ad

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	d6ff2bf02a67e081f1813d63ca32d2891d9acc280d5874de16c262a6eca94e4dadddad08330cb3b87d1241b
kubernetes-client-darwin-amd64.tar.gz	87048a989ce273199059d726a61ca67e09521b696e535db983c65847673c7000e32618e8a1b46d2e008dece
kubernetes-client-linux-386.tar.gz	485c642f9b73fc1ccff7b33f764e13cb85a12c3f0e0ab6c90ac38ad265d13bf45f02615c8649ca5820798c3
kubernetes-client-linux-amd64.tar.gz	230946db5a8b2dd835b61119c6527206c6387ed776d55b6ddd4a67953bc99f0ad11b80a40f1d4393a581dbc
kubernetes-client-linux-arm.tar.gz	791e9d1c21333f626241a0975d5dd88a989e8d7498f48906616f43f9a566af8230e3a82565972c7eb20e4a7
kubernetes-client-linux-arm64.tar.gz	05e7c47d64a9d2bd249c9f5059b9d1fafd30e6233f14dba0313faa01a765cb5e3d5abc095affae7b638f6d6
kubernetes-client-linux-ppc64le.tar.gz	e2ad0edc976a6a276c736885662caae427f7cef11ccd7a0c923240d4d659b13f968644f3df6c9c343039c11
kubernetes-	5f1dbe3b4ddb956b287cda6e9d61f90e0f795ea8400d29fb3b9e5d0422f12d3a584db9319bbf70db3935ae9

client-linux-s390x.tar.gz	
kubernetes-client-windows-386.tar.gz	9aae0dc316ae765b5b5c9d62ba82b9f36556bbe170574437f750c856d35232a36f6aa9575949f1a80bc4c11
kubernetes-client-windows-amd64.tar.gz	28787f5604287b3e00301c6d1c41f7f388fdff32f0b241f956f3f5b5ef56f06d40f62f3368229247121ad13

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	6854aa0a35a952f3906a62a532ca96394e927e96751a5796927afacccf5c9ebc01c19d5e69dfc80f790af6e
kubernetes-server-linux-arm.tar.gz	d4b16aba17b704efe27e28c813c4577a046846794751032b740ed30975d648298ce886b2a2ca37d83ee280b
kubernetes-server-linux-arm64.tar.gz	20b806b8360256d305ebf1187e024d555d9267f9081e83e47de179ccdb27d21e2f03d90dad92a598d3d1229
kubernetes-server-linux-ppc64le.tar.gz	5d4ac12377e3cc236d193566c1a35b3e5a7bc61f78475ba7151285cb920db09c888b33fab529f91bc620fa2
kubernetes-server-linux-s390x.tar.gz	83acc09af047d63ce33c84e9d29efddea49911b7f111f10be5b13d3f63ea72acf258553137b3ca06992a4b7

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	0d0bca352f912c5b1a928fc8bcfa79909c54c394a87df7ede3a5a549fed91129997e2266ecb11c2f405d162
kubernetes-node-linux-arm.tar.gz	be7d4db5155579f06592a93c567b9973016a548140a4754e0358c4b052410bcc34d64097b2926ba7edd3faf
kubernetes-node-linux-arm64.tar.gz	1834a69e0c45029d9ce5e1e489c3b414b89239c3c891a9ef678aeabe634d4d2bdea5e756a0fa199391a8bd3
kubernetes-	3bd9a5ebe63b91a6bb17f14ef5a65f30d9d386f3bb7b64c5ea1d9a25d4df41e07e3494d8bf7c6f36f11df10

node-linux-ppc64le.tar.gz	
kubernetes-node-linux-s390x.tar.gz	900f8ce043f524a5be6db9fe2d1726df4679519732d5b70a247d28e76c91df3f1100f92d8fbfdd89094a1fe
kubernetes-node-windows-amd64.tar.gz	1426234cd069c0cd51dea51fb1de5f1069c5defbc92cb68eebe6781095b2393477c4f85297f7c2361a4eab6

Changelog since v1.12.5

Other notable changes

- kubeadm: fixed nil pointer dereference caused by a bug in url parsing (#74454, @bart0sh)
- kube-apiserver: a request body of a CREATE/UPDATE/PATCH/DELETE resource operation larger than 100 MB will return a 413 "request entity too large" error. (#73805, @caesarxuchao)
  - Custom apiservers built with the latest apiserver library will have the 100MB limit on the body of resource requests as well. The limit can be altered via ServerRunOptions.MaxRequestBodyBytes.
  - The body size limit does not apply to subresources like pods/proxy that proxy request content to another server.
- The apiserver, including both the kube-apiserver and apiservers built with the generic apiserver library, will now return 413 RequestEntityTooLarge error if a json patch contains more than 10,000 operations. (#74000, @caesarxuchao)
- fix smb remount issue on Windows (#73661, @andyzhangx)
- Add `metrics-port` to kube-proxy cmd flags. (#72682, @whypro)
- Adds deleting pods created by DaemonSet assigned to not existing nodes. (#73401, @krzysztof-jastrzebski)
- Fix watch to not send the same set of events multiple times causing watcher to go back in time (#73845, @wojtek-t)
- MAC Address filter has been fixed in vSphere Cloud Provider, it no longer ignores `00:1c:14` and `00:05:69` prefixes (#73721, @frapposelli)
- fixes an error processing watch events when running skewed apiservers (#73482, @liggitt)
- add goroutine to move unschedulable pods to activeq if they are not retried for more than 1 minute (#72558, @denkensk)
- scheduler: use incremental scheduling cycle in PriorityQueue to put all in-flight unschedulable pods back to active queue if we received move request (#73309, @cofyc)
- A new `TaintNodesByCondition` admission plugin taints newly created Node objects as "not ready", to fix a race condition that could cause pods to be scheduled on new nodes before their taints were updated to accurately reflect their reported conditions. This admission plugin is enabled by default if the `TaintNodesByCondition` feature is enabled. (#73097, @bsalamat)
- Scale max-inflight limits together with master VM sizes. (#73268, @wojtek-t)
- Update to go1.10.8 (#73329, @ixdy)
- Allow for watching objects larger than 1MB given etcd accepts objects of size up to 1.5MB (#72053, @wojtek-t)
- Improve efficiency of preemption logic in clusters with many pending pods. (#72895, @bsalamat)

v1.12.5

Documentation

Downloads for v1.12.5

filename	sha512 hash
kubernetes.tar.gz	8b1cbd30f4793d5e0c15d59280159f5db4b63f182dae574ed427365ad559f1c24bd97e5c534f5774a033
kubernetes-src.tar.gz	c6084b4bc05ae15ed39b774d5902f8a3b90b9270fa8188cf2e015ad665f55a52a4185a2758e464d756c9

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	59a183e3c90874017023358f59a9a3816caeef02f3ea9990bf9135db09ae963b329eae192a25f4615ab89b5
kubernetes-client-darwin-amd64.tar.gz	92ea2e856608a02b65a47bb738c7d88796297b7c56a9a2f3a796a8a692cd58fdcc8a022efa731d399da04b9
kubernetes-client-linux-386.tar.gz	59d14c778c56a37eb741ae9c540cf03f4b07f784bff6e9894e0a5fbdb6ab879c64cf97eaadf1c2c20f21120
kubernetes-client-linux-amd64.tar.gz	f14d1c4a8f08263660d988bccdd9676d6b94e99e317bdbb47925417df559a2978decd34ddef485b0a3da4b9
kubernetes-client-linux-arm.tar.gz	0d882a845b2d409d93b9461380315c3cd7480e1fba58469cc95c82e1c11789a865703605a98ef66eed73363
kubernetes-client-linux-arm64.tar.gz	3fe965ca1f89f3af2e3cd8f71a362d925e2a2d2c70f5cc5d489d9205cb7cfa859433c2faf3769bd3fa5f58b
kubernetes-client-linux-ppc64le.tar.gz	1a96f42885ff1d6892a6c755d98bc93efa322149fffb67749ea0fb9c5cfd68698796b12ba888058fe5f931c
kubernetes-client-linux-s390x.tar.gz	1261b89c50c598f9e97d79e59650527d9576daa4da3a3dcdeed407c644fb86c9c47e70c29c9101906c74250
kubernetes-client-windows-386.tar.gz	988c26afd7e28b63a8603755f5754a9578da499b103d2d21c1bda746da99274749c628a4f29a0fa25a959e6
kubernetes-client-	68f5ec71497753dc1f02b91f28cf01842422c0ecbd5bf6549dae38f259c295e15d39b3789e8e957fbc6383f

windows-amd64.tar.gz	

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	61fe4f74f1d0504361a60676b8b9f5f79147984bba8d0fbcb2ce5a5ac0f4ecf59dea6c16254246c732f9926
kubernetes-server-linux-arm.tar.gz	5ce7071e05d07915b3365e6ff8c7dcb7e0d6496c69ca47e486aa29fc190ba4906dae61b3113cdc3c5ea427f
kubernetes-server-linux-arm64.tar.gz	3916bf459a2a2dd1cf9de675a1d5fdb02e4b583ae5e516a72f9005298cd6afd9992962a7855175224000464
kubernetes-server-linux-ppc64le.tar.gz	4d438e9f990e2e7401f99e80ce968afd80b6fdccb5270e65f630d298c3ae91a0cf487e0c769d69ad9dec080
kubernetes-server-linux-s390x.tar.gz	767b2838f73077f9625ad4e420d580120e5f4ef4d53676caa0997de7bf7ef105d31cf476f9abfdf57938f0c

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	8f383852e244d0eb3c1200e28dcd38ce79b477d51131e94ea1839a87e37ed49497f404c43a73fbbab09c62d
kubernetes-node-linux-arm.tar.gz	7904ca258ccc7be7c2ac360b8c4529e8ba818db795af3bb479cec427ecb6fac66aeff5254a3a1a65689e668
kubernetes-node-linux-arm64.tar.gz	28baab4b0824093f70a82b16c3c738aa224e241b3646492c2f305a5d79693033a3f338043ebe5668c3a43f0
kubernetes-node-linux-ppc64le.tar.gz	63f62fb6b1c57a675589d11c94e204469f409dfe532f8abcd47ea9c4e41e24f8a016c65416d902fa5f1103c
kubernetes-node-linux-s390x.tar.gz	d415708747d95a017b80f143b296ae7017683b826b7616f467d6fa546a6318783ebdd655914c2a9682711df
kubernetes-node-	41cecf903fe5b5b0481f32e2d98a7aa43809d70bdd62f7da6ec99b4938cfe3121c10dcb8f7328ccd1505027

windows-amd64.tar.gz	

Changelog since v1.12.4

Other notable changes

- kubectl: fixed an issue with "too old resource version" errors continuously appearing when calling `kubectl delete` (#72825, @liggitt)
- Update Cluster Autoscaler version to 1.12.2. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.12.2 (#72882, @aleksandra-malinowska)
- Fix kube-proxy PodSecurityPolicy binding on GCE & GKE. This was only an issue when running kube-proxy as a DaemonSet, with PodSecurityPolicy enabled. (#72761, @tallclair)
- Fixes spurious 0-length API responses. (#72856, @liggitt)
- client-go: restores behavior of populating the BearerToken field in rest.Config objects constructed from kubeconfig files containing tokenFile config, or from in-cluster configuration. An additional BearerTokenFile field is now populated to enable constructed clients to periodically refresh tokens. (#71713, @liggitt)
- Fix AWS NLB security group updates where valid security group ports were incorrectly removed (#68422, @kellycampbell)
  - when updating a service or when node changes occur.
- Fix scheduling starvation of pods in cluster with large number of unschedulable pods. (#72619, @everpeace)
- client-go: shortens refresh period for token files to 1 minute to ensure auto-rotated projected service account tokens are read frequently enough. (#72437, @liggitt)
- change azure disk host cache to ReadOnly by default (#72229, @andyzhangx)
- Fixes a bug in HPA controller so HPAs are always updated every resyncPeriod (15 seconds). (#72373, @krzysztof-jastrzebski)
- Fixes issue with cleaning up stale NFS subpath mounts (#71804, @msau42)
- Fix device mountable volume names in DSW to prevent races in device mountable plugin, e.g. local. (#71509, @cofyc)
- Fixes a bug in previous releases where a pod could be placed inside another pod's cgroup when specifying --cgroup-root (#70678, @dashpole)
- Fixes issue where subpath volume content was deleted during orphaned pod cleanup for Local volumes that are directories (and not mount points) on the root filesystem. (#72291, @msau42)
- Fix a race condition in the scheduler preemption logic that could cause nominatedNodeName of a pod not to be considered in one or more scheduling cycles. (#72504, @bsalamat)
- Fix race condition introduced by graceful termination which can lead to a deadlock in kube-proxy (#72361, @lbernail)
- Support graceful termination with IPVS when deleting a service (#71895, @lbernail)
- Fixes an issue where Portworx volumes cannot be mounted if 9001 port is already in use on the host and users remap 9001 to another port. (#70392, @harsh-px)
- fix race condition when attach azure disk in vmss (#71992, @andyzhangx)
- Fixed kubelet reporting "resource name may not be empty" when mounting a volume very quickly after unmount. (#71074, @jsafrane)
- Update to use go1.10.7 with fix for CVE-2018-16875 (#72072, @ixdy)
- kube-proxy in IPVS mode will stop initiating connections to terminating pods for services with sessionAffinity set. (#71834, @lbernail)

v1.12.4

Documentation

Downloads for v1.12.4

filename	sha512 hash
kubernetes.tar.gz	35fd7a207cf3b6a5d569b1aad2fbccaf82ae394e6c91d3b1861b9e73b5069ca83aee8d5cdaa2e65f7275
kubernetes-src.tar.gz	ec7a67dfd82b0e8dd5020ebd3f059c38bb751bbb868b91410516cdde260f5a768ce4237a272c78f8a6b3

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	96568f7d8f9583565345841b56c14ede552028d43b9425ed59bac343fab54e4a522d435b31e62e7cfa877e3
kubernetes-client-darwin-amd64.tar.gz	ba9c3d8186da6c4d41e1cfd19b0b9e317bba9b41124a46d6fb6820bd564059bca5d480639e3b2c415dd0d40
kubernetes-client-linux-386.tar.gz	4c90bf1f267545ae835d2c098829b15a4b093be8b6212bd30e4f9eade6bd25334ec54638f5b8917a1954343
kubernetes-client-linux-amd64.tar.gz	68edc349340f94d30c44f190eaf894d0df5dc6cda6e875335d7b34ea02febe05efaf8239cbf3a3153914ad9
kubernetes-client-linux-arm.tar.gz	a18faf32226c95dc864b5f4d728eb1d9bf84ee972fd690555c63c92f56f42c6e0dc65d60b4d59f9d549b317
kubernetes-client-linux-arm64.tar.gz	ca70191ee9801de4721a367a7bf751b6b3b0347c48d8fddc1c898a87ed345c7bf32d3237123a4ab3776b619
kubernetes-client-linux-ppc64le.tar.gz	4a9c55bc8c63a0a4ee606dcc80736af8504f194a92a737684cb8f8c65cf9d7ca3663b0dccb934ff48a7f7fa
kubernetes-client-linux-s390x.tar.gz	088f9cee592db55de3cc7c382dca7eb118670952a68d5f91e7722e1c4a3f81e7c5b0cb800f805ba15d0d444
kubernetes-client-windows-386.tar.gz	56f52a924d212e01c04ebf57163c8cb709e65d87cce5131bb2766f876f5cd82ab757108e75d8ac7c64fb0b0

kubernetes-client-windows-amd64.tar.gz	d2e3f2976cce4779539ea5ce09a3745293cfa63b872d449ae49a0b811b202a7223223d9fa16f91dc5901aab

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	d5b4a448c03800c146a8abe924349fa5bb3ee4b1215f2c154171812325d056f488269bd29a8ff25dd3a16ca
kubernetes-server-linux-arm.tar.gz	e1a3f1e6d8b20482a1bfd37081f45758022930e13bf13f8a06e4f65fb9fc01d138511e5a4368bbdef342744
kubernetes-server-linux-arm64.tar.gz	d10b4b6e4ccb6652a6b64b0b32751a7ed151baf8054fcad8c9ff8e477d0c4a4a8386f2d433462570f78b575
kubernetes-server-linux-ppc64le.tar.gz	7076feb091b9b9c01af7bb3a23cdd8b7a4716c7da454029551dc6d2862813b4b5460ea70e4ba0a604ede3ea
kubernetes-server-linux-s390x.tar.gz	5d2faa0309f0d6ed88f242ce621588cd6fb3c2c7e87230b5452cda8c86b649407c0dc7ef2ad0ef78f63aade

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	060304784430f3200c337edbd63dd46e04b2fa32cbb82a3f39e020ce157b6c3634e2ca5817f8e4f26c7f498
kubernetes-node-linux-arm.tar.gz	a4bb2548075a04decec14d672921ac99ff90afbae3bc74ccdc778fdb15087ceef3b9a691871fccda36aae07
kubernetes-node-linux-arm64.tar.gz	a9e8d364f55d63c3b42f3441b64a1995d5820886d0963389fa086b5083db30a0bd7412e12ce49d6d777587a
kubernetes-node-linux-ppc64le.tar.gz	4aed63ade9f735439a11e87ffeadd2bb41302d07fe4e5168cb2fb2b241b2cf51a9015ad181426ca8b94fcda
kubernetes-node-linux-s390x.tar.gz	bd64af61473b1e1cee99df44455ee588a5fbb5a1348d3e17af60673024d5591dece97fde5c546fdd5822288
kubernetes-	5944e1fcf835464d1efb1c7e21b11c1701a4b236cd2be176139d5cadfbaf91840de674c5e40470ceb3c8213

node-windows-amd64.tar.gz	

Changelog since v1.12.3

Action Required

- ACTION REQUIRED: The Node.Status.Volumes.Attached.DevicePath fields is deprecated for CSI volumes and will be unset in a future release (#71095, @msau42)

Other notable changes

- fix kubelet log flushing issue in azure disk (#71990, @andyzhangx)
- Disable proxy to loopback and linklocal (#71980, @micahhausler)
- fix issue: vm sku restriction policy does not work in azure disk attach/detach (#71941, @andyzhangx)
- Scheduler only activates unschedulable pods if node's scheduling related properties change. (#71551, @mlmhl)
- UDP connections now support graceful termination in IPVS mode (#71515, @lbernail)
- Fixes an issue where Azure VMSS instances not existing in Azure were not being deleted by the Cloud Controller Manager. (#71597, @marc-sensenich)
- Include CRD for BGPConfigurations, needed for calico 2.x to 3.x upgrade. (#71868, @satyasm)
- On GCI, NPD starts to monitor kubelet, docker, containerd crashlooping, read-only filesystem and corrupt docker overlay2 issues. (#71522, @wangzhen127)
- Only use the first IP address got from instance metadata. This is because Azure CNI would set up a list of IP addresses in instance metadata, while only the first one is the Node's IP. (#71736, @feiskyer)
- kube-controller-manager: fixed issue display help for the deprecated insecure --port flag (#71601, @liggitt)
- Fixes apiserver nil pointer panics when requesting v2beta1 autoscaling object metrics (#71744, @yue9944882)
- Fix a potential bug that scheduler preempts unnecessary pods. (#70898, @Huang-Wei)
- The kube-apiserver's healthz now takes in an optional query parameter which allows you to disable health checks from causing healthz failures. (#70676, @logicalhan)
- Fix scheduling starvation of pods in cluster with large number of unschedulable pods. (#71488, @bsalamat)
- Upgrade Stackdriver Logging Agent addon image to 0.6-1.6.0-1 to use Fluentd v1.2. This provides nanoseconds timestamp granularity for logs. (#70954, @qingling128)
- fix detach azure disk issue due to dirty cache (#71495, @andyzhangx)
- Fixes ability for admin/edit/view users to see controller revisions, needed for kubectl rollout commands (#70699, @liggitt)
- Upgrade golang.org/x/net image to release-branch.go1.10 (#70663, @wenjiaswe)
- [GCE] Filter out spammy audit logs from cluster autoscaler. (#70696, @loburm)
- Correctly default Audience in the kubelet for TokenRequestProjections. (#71007, @mikedanese)
- fix azure disk attach/detach failed forever issue (#71377, @andyzhangx)
- Fix a scheduler panic due to internal cache inconsistency (#71063, @Huang-Wei)
- apiserver: fixes handling and logging of panics in REST handlers to prevent crashes (#71076, @liggitt)
- Fixes an issue with stuck connections handling error responses (#71419, @liggitt)

v1.12.3

Documentation

Downloads for v1.12.3

filename	sha512 hash
kubernetes.tar.gz	f4bad1ae3632c715dd4be50e960faba890307e2c8e906edd59389d69a2352b58f093b554b5830de05832
kubernetes-src.tar.gz	30d8367049e71241336e11e018948bd7ad90cf27ff1007b8132b4f928284ae778e708d61b641e8bf499b

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	90991e3c3aa72dd9b33fc9f7ba2b986f126fb1f547f25edb8cc1e561da76c3d1c2e988c93ad470bc2ced520
kubernetes-client-darwin-amd64.tar.gz	bbbfaedfc043cf8be809af52901ab31721a90e6234834cda7e874266f3e2f47028cd143b18e7248aaaf60d4
kubernetes-client-linux-386.tar.gz	15a5c37e9deffabe4c35bede095d9df02a59ab4b29a94042ee03122bde8b20faabd7d24644a99085473772e
kubernetes-client-linux-amd64.tar.gz	277f6f6420b7554ddc099eb0d31d11240d71acce906cf5f1214881f26662012c1ec0d8e50ad07b9c3e8f40d
kubernetes-client-linux-arm.tar.gz	8e58ec3aa8e9b6ea38fbc075dee0e90e36d48aa567d4459175ed223d1c907d4e433ef5bc292416d8c138411
kubernetes-client-linux-arm64.tar.gz	10144f52577d0a83f0b26fe6c5e299777a2bcbcb022a53d4d0ad95e25d1604b09512b537a3dab7e967f00c1
kubernetes-client-linux-ppc64le.tar.gz	db67e83bfa51346c7f8de2cf6ca3b90add6b3e766086e81ec7ea3dc9491b6db7dbcfc9522e187672f6b3895
kubernetes-client-linux-s390x.tar.gz	93f9c886e0dffd021da14a83e9047a8276f4db51c51b460743e22f64f0ab58a6e8f508849fcff15a2eef2bb
kubernetes-client-windows-386.tar.gz	d523e5c950f53213db4544e0491444ed749deec93749fbfdf02b68d6e9bb84b015020917a6f11e4836ebfd8
kubernetes-client-windows-amd64.tar.gz	1be6053d44b91dd4cb24acb584487a26321e1806573c793177569879f4a165fa3daa491ac3bf91f49be602e

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	13363365457ff7527f92c4d371b6dedc6e77553f596e694bb8479511fded9ab8694ae4540752268f82acbc3
kubernetes-server-linux-arm.tar.gz	b73846110f47fb5bbb9861bc4bd9bfc12be1e1d2306426044e0b08e288d3f512ed1c4bec0e8e3d2d009cf92
kubernetes-server-linux-arm64.tar.gz	88ce03ba915a05f64ba56b5e1fc8feb02c1dc9b2c5244e794c7bde7d32ccf559333337298680c9d57c8f4819
kubernetes-server-linux-ppc64le.tar.gz	82274a9a2a151ab8262fe729b13828b32737bdd579ee2411c4fb3618f40be899b0132029ccc99accc3cd752
kubernetes-server-linux-s390x.tar.gz	215e1102f1310bc3125e6ffba3db3730c817e0aae31d69189d9522de77563e4c8341a4fee6135788db54975

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	09441ec75f0aba7f537238cfdd7ec2790f52f383b730d6ecf2f40ff11d0ad7aba084a89976fe3addf71a466
kubernetes-node-linux-arm.tar.gz	3ae8c3f223175022211185df9fe27d3b910bb3669df312a5413379dfafe9870f190857a2639ab958ed18278
kubernetes-node-linux-arm64.tar.gz	ab8ad3e4994aa603a68ee4312f444e586c0d547e22ff2d45725b1a72d9f417812bf573e241715a4975f50e2
kubernetes-node-linux-ppc64le.tar.gz	153ba602142730bbbc81c96b20cbf03b9ce6e746922a655b27952b30326de90756489389c894244abdc9d70
kubernetes-node-linux-s390x.tar.gz	8a5a1794d0ac82a5351abbddc815eff458514f1f023d0d0a5919891ce79fdd8474b637cb04e5600ccedcba6
kubernetes-node-windows-amd64.tar.gz	90458d17d494d95f4e914c897f5d6bffcea1279bd5600a944f3277baf5d50ab7ce354cc5bd5000c885489a3

Changelog since v1.12.2

Other notable changes

- CVE-2018-1002105: Fix critical security issue in kube-apiserver upgrade request proxy handler (#71411, @liggitt)
- remove retry operation on attach/detach azure disk (#70568, @andyzhangx)
- Fix CSI volume limits not showing up in node's capacity and allocatable (#70540, @gnufied)
- kubeadm: fix a panic when calling "alpha phase certs renew all --use-api=false" (#70768, @neolit123)
- Update Cluster Autoscaler to 1.12.1 (#70705, @losipiuk)
- Improve Azure instance metadata handling by adding caches. (#70353, @feiskyer)
- Ensure orphan public IPs on Azure deleted when service recreated with the same name. (#70463, @feiskyer)
- fix azure disk attachment error on Linux (#70002, @andyzhangx)
- Fix cloud-controller-manager crash when using OpenStack provider and PersistentVolume initializing controller (#70459, @mvladev)
- Corrects check for non-Azure managed nodes with the Azure cloud provider (#70135, @marc-sensenich)
- GCE/GKE load balancer health check default interval changes from 2 seconds to 8 seconds, unhealthyThreshold to 3. (#70099, @grayluck)
    - Health check parameters are configurable to be bigger than default values.

v1.12.2

Documentation

Downloads for v1.12.2

filename	sha512 hash
kubernetes.tar.gz	289ecf691164c70e392cea6f9f5b642b081ae9bd19c83113fe1abce8e7dc96baeae807f21e1b86d89434
kubernetes-src.tar.gz	16d43d25e7a5f37e79b9cd91783e90af78566737c8ad22d2104f63af394377fc84d187c3c0090ba65805

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	cd1781ed2dc1f365a034727b37ba978c2e4ba5c321a2fb768e971f9b9a87276a70e184a61fcd9d87e97d719
kubernetes-client-darwin-amd64.tar.gz	19422d4e4d47242f7d1ba67f647513d32f179e31a705c861188c1555faa8c521357f68fd81eabc4f14584bc
kubernetes-client-linux-386.tar.gz	674ebc0ffdb4b5935d4718e80b457605f939ae70509f192aa09dfae206aa01c45052d7c5fe086cd936d9f2b
kubernetes-client-linux-amd64.tar.gz	902f7de49be50bad61909790073aa46e9fab66b227fd06bebd6b0f7eecbd76b688e15fd45adf68e3ee88b05
kubernetes-	27f0fe9a05af35bfdf9b870788c3474ab7c00dd5617f116f03848ff6f9e31b57e02991def1c16bbe1bc8f71

client-linux-arm.tar.gz	
kubernetes-client-linux-arm64.tar.gz	f72944d2f8a16c5890048c3d06e087d9b2031f7d6f0f79a9bacdaa3cc4280495706b2ac71fa8bac0cd14210
kubernetes-client-linux-ppc64le.tar.gz	62f3a806f4a74283a492e8a642d5d3ca625148be3ab7778fcdadc8d25da39f9857e4d060c4c9f3dd30800ef
kubernetes-client-linux-s390x.tar.gz	63c1d6fc331297541b52edd4e59824bba50f8bef36fceaa16eb9792577af8ac09f939f8c6bea2f687b9bc70
kubernetes-client-windows-386.tar.gz	4406456d3db26bb5cba408ad4d425dd595752745be683387ec043f945f186213e8a7f17713c38f26de4189b
kubernetes-client-windows-amd64.tar.gz	632853db2e1e2dd9f96406a9a6106c40aa34d1abbceea0b3b641599bb79bb924b01df19d597d42d007a03be

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	37b6b05ff429c11895224d7bfff64dd7826b82456b4dbcc84a3adf5e86eec6a130e215de88c4204c4576100
kubernetes-server-linux-arm.tar.gz	cd67cd06d90aad2e66b57abf103021f954c029efb8678df701c53e335c480a7520f423a58f11117b02a8b30
kubernetes-server-linux-arm64.tar.gz	b8a6a4d6f138e701a3acda8eaa3586ed2f5137463112f339b69bb0f46ff6c73c84df48b84e35efa4863d8f2
kubernetes-server-linux-ppc64le.tar.gz	a55fb0b4e618c8e585bae7e526732b33021520947e182c846f85620c513d6610ee2e367b86d74b110903b9e
kubernetes-server-linux-s390x.tar.gz	e63df3aa71a5e60189f7931dfc50764162c6d8d49c3df4dc92c4e10e576cf3656ac629ed18e7da729a6a0c3

Node Binaries

filename	sha512 hash
kubernetes-	63a41ae964dd934e378c834998e7f20a4c14b819d68f39607344b6baacaf41f4bb7848be96ac0501e261140

node-linux-amd64.tar.gz	
kubernetes-node-linux-arm.tar.gz	9379574f4458e91ab025a0c0aab5f4abedd991afad23d447b294c2d3293ca2f7f68b6e94eb9417a6fad06de
kubernetes-node-linux-arm64.tar.gz	027b4f5149a3125ac713e7d974cbb8cba079a7b425b9b096877a74ea30697c8525060729de5556214e1caf3
kubernetes-node-linux-ppc64le.tar.gz	a486432f3e8a83d10c8e14811e24ba7d5d4e57e17fee7aed11429271aaf8b31ae38403480c2e8fbc2a7c0e2
kubernetes-node-linux-s390x.tar.gz	33e4bf55260aec16b4576c09144caa149811bb37868fff34b0138815fa2c159b2d5885c33c47fc4f71ad4ed
kubernetes-node-windows-amd64.tar.gz	e6abdf845e80942ea4757219900a7b0d16fd2d6313f22145d71e51fe22c161ac0b2f0f744d51f99682b2b15

Changelog since v1.12.1

Other notable changes

- IPVS proxier mode now support connection based graceful termination. (#66012, @Lion-Wei)
- add more logging for azure disk diagnostics (#70012, @andyzhangx)
- Scheduling conformance tests related to daemonsets should set the annotation that relaxes node selection restrictions, if any are set. This ensures conformance tests can run on a wider array of clusters. (#68793, @aveshagarwal)
- Disabled ScheduleDaemonSetPods if kubelet version less than 1.11; and ScheduleDaemonSetPods is not supported on a 1.13 control plane / 1.10 kubelet split. (#69566, @k82cn)
- kubeadm: fix an issue where 'config view' did not return a config in case of a 1.12 cluster (#69969, @neolit123)
- Updates defaultbackend to 1.5 (#69380, @bowei)
- Restrict redirect following from the apiserver to same-host redirects, and ignore redirects in some cases. (#66516, @tallclair)
- Enable insertId generation, and update Stackdriver Logging Agent image to 0.5-1.5.36-1-k8s. This help reduce log duplication and guarantee log order. (#68920, @qingling128)
- Fix cluster autoscaler addon permissions so it can access batch/job. (#69858, @losipiuk)
- Add tolerations for Stackdriver Logging and Metadata Agents. (#69737, @qingling128)
- change default azure file mount permission to 0777 (#69854, @andyzhangx)
- Fix a bug in the scheduler that could cause the scheduler to go to an infinite loop when all nodes in a zone are removed. (#69758, @bsalamat)
- fix GetVolumeLimits log flushing issue (#69558, @andyzhangx)
- kube-apiserver: fixes `procMount` field incorrectly being marked as required in openapi schema (#69744, @jessfraz)
- [GCE] Enable by default audit logging truncating backend. (#68288, @loburm)

- kubeadm: fix a possible scenario where kubeadm can pull much newer control-plane images (#69301, @neolit123)
- The runtimeHandler field on the RuntimeClass resource now accepts the empty string. (#69550, @tallclair)
- OpenAPI spec and API reference now reflect dryRun query parameter for POST/PUT/PATCH operations (#69359, @roycaihw)

v1.12.1

Documentation

Downloads for v1.12.1

filename	sha512 hash
kubernetes.tar.gz	5a0cb3c8f99621fb061310585e6cbeb3451788c0d55d444d0af9899302f0ae2bcd9757a052c7c3b3a13c
kubernetes-src.tar.gz	7db4c2b3534bf22506f4a407bb462caad749a60c8098c342300a40ae8a66b23e666b6cb9d42f3ab46dc1

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	53fc3028d0bfd7a7f7a0a248818a2651db860b01db3bca4d83a40ebfac5165a0180cf6edf6046be783661d9
kubernetes-client-darwin-amd64.tar.gz	df0c4a9e28da98e19cdeaf7ffaa1fdefd0581937889048fc01954fdacec737d66911e8d6dad36d00867b926
kubernetes-client-linux-386.tar.gz	88b7043803baf288ab3a9bf1aa71a88862142ef6674fb26c367f53aace3416cf651fab999212cb8a4da9f5a
kubernetes-client-linux-amd64.tar.gz	f8a6f010ee769740d4271792187ee2ec38db385cd8ef86c1acb8858b3bc1393352ccaad82e97383ce43426a
kubernetes-client-linux-arm.tar.gz	3db8a72b02b8300f0ce873d9827493cab9f710267716228593c919d4e26e78cb6b9f9f5218e7522f9efc520
kubernetes-client-linux-arm64.tar.gz	eb66b39ee996a0f40af383c8fbdf638b683c6537bd91be54486c6b79a09242da40398039387e0a3da97b39d
kubernetes-client-linux-ppc64le.tar.gz	07d4e4791c196075efa65106ebec4726e5d5ed241178a52d87d6cb90d4d2c5e93204ac134cdf17277b158b9
kubernetes-client-linux-	1cbbeb5bad276d35c20d10fffc3dfc917d02a89dd885cbaecb5b7532992aaadab531229aa78a0aaca091a0f

s390x.tar.gz	
kubernetes-client-windows-386.tar.gz	5e8772c1f746e09a3f1169b53fb6d90d04380609964921baa7a6f77c2c49b6300df6a1546e5a5775d6e5a12
kubernetes-client-windows-amd64.tar.gz	59526f0d745b4a716333a1f2e1800b7a4e35071f170633cab738888ec234aca3f4597f7dff1da41d31533e4

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	3e56b8c092c08e419dabf65079078aacc3da66aba73b6376546a420bf888e96ddb94da6a85b44ef8f5854c6
kubernetes-server-linux-arm.tar.gz	27129a0934582d6fb6ffaba5cfe7ca11bacd15dd09c83335eb86d94a9a592c4da4009b4d4a06e105b106aed
kubernetes-server-linux-arm64.tar.gz	c21589438ec6d93d9f5777f15ab9d4e24eed31f1d9ad365e792b7e73334454cb841209b50a43bc209377b73
kubernetes-server-linux-ppc64le.tar.gz	e89ee7b92fca05c41c51d10343da990287ad002764e071f88503b8e701d528d13a2f1416769968e74bce524
kubernetes-server-linux-s390x.tar.gz	7dec3cca91a767feae0bf884c70ebb8b44b73a41f2b0230cbdb12860184a18dcf7b5ae0d01966eb5e9eabe3

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	f59f302119dddeb13e11abf321bd17ca0d44d04013d2f142e91590d25ccd2c83a9ab0835bb0634a3baff86f
kubernetes-node-linux-arm.tar.gz	70b57699c4b2a3e044ef0effa8ddbb090c1879a98a68f065fce0b8c79af9912950aa2d9d33b9658771a5c3d
kubernetes-node-linux-arm64.tar.gz	5b5fc9f0c50d3a820bd601e5b683738d289b19d30c34fb2eaafea371655d3f25126a8da867c5612c0a5debd
kubernetes-node-linux-	2801eaca2f5ce1e2a32af5c42f1b08770f1ffad440caa7b8757c2e7c8a82e2e3ff1894a4f79ff805e0fd887

ppc64le.tar.gz	
kubernetes-node-linux-s390x.tar.gz	c9b7c824366909babfd058fe05ac2064b4755a32e81065c542a8c68c5ce5f8fddf4f2f3efeb6d4943f5ab0e
kubernetes-node-windows-amd64.tar.gz	7305cc05c0c37ffeed7ee85bae67e5c6f58a605fd8ad9372ed9ded553c3f1038d04300c36b1eea83c947702

Changelog since v1.12.0

Other notable changes

- kubeadm now allows mixing of init/cluster and join configuration in a single YAML file (although a warning gets printed in this case). (#69426, @rosti)
- Pod disruption budgets shouldn't be checked for terminal pods while evicting (#68892, @ravisantoshgudimetla)
- Update crictl to v1.12.0 (#69033, @feiskyer)
- Enable AttachVolumeLimit feature (#69225, @gnufied)
- [GCP] Added env variables to control CPU requests of kube-controller-manager and kube-scheduler. (#68823, @loburm)
- Fixed panic on iSCSI volume tear down. (#69140, @jsafrane)
- Fixed CSIDriver API object to allow missing fields. (#69331, @jsafrane)
- Allows changing nodeName in endpoint update. (#68575, @prameshj)
- Reduced excessive logging from fluentd-gcp-scaler. (#68837, @x13n)
- kubeadm: Fixed support of node certificates when joining a cluster (#69328, @bart0sh)
- Fix an issue where filesystems are not unmounted when a backend is not reachable and returns EIO. (#67097, @chakri-nelluri)
- Use the mounted "/var/run/secrets/kubernetes.io/serviceaccount/token" as the token file for running in-cluster based e2e testing. (#69273, @dims)
- Fix panic in kubectl rollout commands (#69151, @soltysh)
- Fix scheduler crashes when Prioritize Map function returns error. (#69135, @DylanBLE)
- Add fallbacks to ARM API when getting empty node IP from Azure IMDS (#69077, @feiskyer)
- fix UnmountDevice failure on Windows (#68608, @andyzhangx)
- Adds permissions for startup of an on-cluster kube-controller-manager (#69062, @dghubble)
- Get public IP for Azure vmss nodes. (#68498, @feiskyer)
- Deduplicate PATH items when reading plugins. (#69170, @soltysh)

v1.12.0

Documentation

Downloads for v1.12.0

filename	sha512 hash
kubernetes.tar.gz	a3db4289ed722db75e51b50f6070d9ec4237c6da0c15e306846d88f4ac5d23c632e1e91c356f54be8abb
kubernetes-	d7c1b837095eb1c0accdbe56020a4f9e64ecc8856fb95f872ff1eacc932948630f62df1d848320cf29f3

src.tar.gz	

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	a78608d8a1a88219425d9c6266acbf3d93bf1541862cef4c84a6b0bf4741d80f34c91eb1997587d370f69df
kubernetes-client-darwin-amd64.tar.gz	eea9201e28dff246730cf43134584df0f94a3de05d1a88191ed62c20ebdab40ce9eae97852571fbc991e9b2
kubernetes-client-linux-386.tar.gz	11c5d6629cd8cbcf9ca241043774ca93085edc642b878afb77b3cef2ef26f8b018af1ade362ed742d378197
kubernetes-client-linux-amd64.tar.gz	41d976898cd56a2899bfdcac028a54f2ea5b729320908004bdb3ea33576a1d0f25baa61e12a14c9eb011d87
kubernetes-client-linux-arm.tar.gz	c7f363effbbbaddc85d933d4b86f5b56ce6e6472e763ae59ff6888084280a4efda21c4447afba80a479ac6b
kubernetes-client-linux-arm64.tar.gz	8dd0ef808d75e4456aa3fd3d109248280f7436be9c72790d99a8cd7643561160569e9ad466c75240d1b195b
kubernetes-client-linux-ppc64le.tar.gz	eff7b0cab10adad04558a24be283c990466380b0dcd0f71be25ac4421c88fec7291e895503308539058cfe1
kubernetes-client-linux-s390x.tar.gz	535fb787c8b26f4dcf9b159a7cd00ea482c4e14d5fc2cd150402ba8ea2ccfb28c2cdae73843b31b689ad8c2
kubernetes-client-windows-386.tar.gz	11036a56d60c5e9ee12f02147ca9f233498a008c901e1e68196444be961440f5d544e1ca180930183f01e2a
kubernetes-client-windows-amd64.tar.gz	e560abcb8fbe733ec7d945d9e12f6e7a873dd3c0fd1cbe1ecd369775f9374f289242778deea80c47d46d62a

Server Binaries

filename	sha512 hash
kubernetes-server-linux-	093d44afc221c9bdf6d5d825726404efbb07b882ca4f69186ec681273f24875f8b8b0065bceba27b1ec1727

amd64.tar.gz	
kubernetes-server-linux-arm.tar.gz	a3178ed50562d24b63e27fa9bd99ccd1b244dea508b537ad08c49ce78bb4ba0fea606216135aea67b89329a
kubernetes-server-linux-arm64.tar.gz	b8bf707dabd0710fbc4590ce75a63773339e00f32779a4b59c5039b94888acfe96689ef76a1599a870d51bd
kubernetes-server-linux-ppc64le.tar.gz	a9d8e1eef7f3a548b44ebb9df3f9f6b5592773d4b89bbe17842242b8c9bb67331a4513255f54169a602933d
kubernetes-server-linux-s390x.tar.gz	e584d42d7059ed917dcc66e328e20ef15487ccc2b0ebffa43f0c466633d8ac49d6e0f6cbdf5f9b3824cd857

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	6e0d16a21bd0f9a84222838cf75532a32df350b08b5073b3dbbc3338720daf6a1c24927ee191175d2d07a5b
kubernetes-node-linux-arm.tar.gz	8509894b54a6e0d42aef637ef84443688e2f8ee0942b33842651e5760aad6f8283045a2bd55b8e4f43dcf63
kubernetes-node-linux-arm64.tar.gz	f1555af73cf96d12e632b2cf42f2c4ac962d8da25fb41f36d768428a93544bee0fdcc86237e5d15d513e717
kubernetes-node-linux-ppc64le.tar.gz	fb23f3021350d3f60df4ccab113f927f3521fd1f91851e028eb05e246fe6269c25ebe0dc4257b797c61d36a
kubernetes-node-linux-s390x.tar.gz	fbf6cb2273ab4d253693967a5ee111b5177dd23b08a26d33c1e90ec6e5bf2f1d6877858721ecdd7ad583cbf
kubernetes-node-windows-amd64.tar.gz	fdec44561ef0e4d50c6a256aa6eb7255e5da4f6511e91f08d0e579ff13c91faa42e1e07a7992ad2a03b234d

> - *Start SHA: 91e7b4fd31fcd3d5f436da26c980becec37ceefe*
> - *End Sha: 337e0e18f1aefa199bd0a1786f8eab42e948064c*

Known Issues

- Feature #566 enabling CoreDNS as the default for kube-up deployments was dropped from the release due to a scalability memory resource consumption issue observed. If a cluster operator is considering using

CoreDNS on a cluster greater than 2000 nodes, it may be necessary to give more consideration to CoreDNS pod memory resource limits and experimentally measure that memory usage versus cluster resource availability.

- kube-controller-manager currently needs a writable `--cert-dir` (default is `/var/run/kubernetes`) for generating self-signed certificates, when no `--tls-cert-file` or `--tls-private-key-file` are provided.
- The `system:kube-controller-manager` ClusterRole lacks permission to `get` the `configmap` extension-apiserver-authentication. kube-controller-manager errors if run with a service account bound to the clusterrole.
- Runtime handler and Windows npipe protocol are not supported yet in crictl v1.11.x. Those features will be supported in crictl v1.12.0, together with Kubernetes v1.12.1.

Major Themes

SIG API Machinery

SIG API work this cycle involved development of the "dry run" functionality, which enables users to see the results of a particular command without persisting those changes.

SIG-autoscaling

SIG Autoscaling focused on improving the Horizontal Pod Autoscaling API and algorithm:

- We released autoscaling/v2beta2, which cleans up and unifies the API
- We improved readiness detection and smoothing to work well in a larger variety or use cases

SIG-Azure

Sig Azure was focused on two primary new alpha features:

- Adding Azure Availability Zones support to cloud provider.
- Supporting Cross RG resources (disks, Azure File and node [Experimental]

Besides the above new features, support for Azure Virtual Machine Scale Sets (VMSS) and Cluster-Autoscaler is now stable and considered GA:

- Azure virtual machine scale sets (VMSS) allow you to create and manage identical load balanced VMs that automatically increase or decrease based on demand or a set schedule.
- With this new stable feature, Kubernetes supports the scaling of containerized applications with Azure VMSS, including the ability to integrate it with cluster-autoscaler to automatically adjust the size of the Kubernetes clusters based on the same conditions.

SIG-cli

SIG CLI focused on implementing the new plugin mechanism, providing a library with common CLI tooling for plugin authors and further refactorings of the code.

SIG-cloud-provider

This is the first Kubernetes release for this SIG! In v1.12, SIG Cloud Provider focused on building the processes and infrastructure to better support existing and new cloud providers. Some of these initiatives (many of which are still in progress) are:

- Reporting E2E conformance test results to TestGrid from every cloud provider (in collaboration with SIG Testing & SIG Release)

- Defining minimum required documentation from each cloud provider which includes (in collaboration with SIG Docs):
  - example manifests for the kube-apiserver, kube-controller-manager, kube-schedule, kubelet, and the cloud-controller-manager
  - labels/annotations that are consumed by any cloud specific controllers

In addition to the above, SIG Cloud Provider has been focusing on a long running effort to remove cloud provider code from kubernetes/kubernetes.

SIG-cluster-lifecycle

In 1.12, SIG Cluster lifecycle has focused on improving the user experience in kubeadm, by fixing a number of bugs and adding some new important features.

Here is a list of some of the changes that have been made to kubeadm:

- Kubeadm internal config has been promoted to `v1alpha3`:
  - `v1alpha1` has been removed.
  - `v1alpha3` has split apart `MasterConfiguration` into separate components; `InitConfiguration`, `ClusterConfiguration`, `JoinConfiguration`, `KubeletConfiguration`, and `KubeProxyConfiguration`
  - Different configuration types can be supplied all in the same file separated by `---`.
- Improved CRI handling
  - crictl is no longer required in docker-only setups.
  - Better detection of installed CRI.
  - Better output for image pull errors.
- Improved air-gapped and offline support
  - kubeadm now handles air-gapped environments by using the local client version as a fallback.
  - Some kubeadm commands are now allowed to work in a completely offline mode.
- Certificate handling improvements:
  - Renew certs as part of upgrade.
  - New `kubeadm alpha phase certs renew` command for renewing certificates.
  - Certificates created with kubeadm now have improved uniqueness of Distinguished Name fields.
- HA improvements:
  - `kubeadm join --experimental-control-plane` can now be used to join control plane instances to an existing cluster.
  - `kubeadm upgrade node experimental-control-plane` can now be used for upgrading secondary control plane instances created with `kubeadm join --experimental-control-plane`. Multi-arch support (EXPERIMENTAL):
  - kubeadm now adds support for docker “schema 2” manifest lists. This is preliminary part of the process of making kubeadm based k8s deployments to support multiple architectures. Deprecating features:
  - The Alpha feature-gates HighAvailability, SelfHosting, CertsInSecrets are now deprecated, and will be removed in k8s v1.13.0.

SIG-ibmcloud

As a newly created SIG, the SIG-ibmcloud has mainly focused on SIG set up, sharing IBM Clouds ongoing Kubernetes work like scalability tests, Kubernetes upgrade strategy etc. with the SIG members and start working on processes to move cloud provider code to a public GitHub repo.

SIG-instrumentation

No feature work, but a large refactoring of metrics-server as well as a number of bug fixes.

SIG-node

SIG-node graduated the PodShareProcessNamespace feature from alpha to beta. This feature allows a pod spec to request that all containers in a pod share a common process namespaces.

Two alpha features were also added in this release.

The RuntimeClass alpha feature enables a node to surface multiple runtime options to support a variety of workload types. Examples include native linux containers, and “sandboxed” containers that isolate the container from the host kernel.

The CustomCFSQuotaPeriod alpha feature enables node administrators to change the default period used to enforce CFS quota on a node. This can improve performance for some workloads that experience latency while using CFS quota with the default measurement period. Finally, the SIG continues to focus on improving reliability by fixing bugs while working out design and implementation of future features.

SIG-OpenStack

SIG-OpenStack development was primarily focused on fixing bugs and improving feature parity with OpenStack resources. New features were primarily limited to the external provider in an effort to drive adoption of the OpenStack external provider over the in-tree provider.

In-tree bug fixes and improvements included:

- Fix load balancer status without VIP.
- Fix filtering of server status.
- Fix resizing PVC of Cinder volume.
- Disable load balancer configuration if it is not defined in cloud config.
- Add support for node shutdown taint.

The external provider includes all of the above with the additional fixes and features:

- Fix bug to prevent allocation of existing floating IP.
- Fix Cinder authentication bug when OS_DOMAIN_NAME not specified.
- Fix Keystone authentication errors by skipping synchronization for unscoped tokens.
- Fix authentication error for client-auth-plugin
- Fix dependency references from in-tree-provider to point to external provider.
- Add shutdown instance by Provider ID.
- Add annotation to preserve floating IP after service delete.
- Add conformance testing to stable and development branches.
- Add support support to Manilla for trustee authentication and supplying custom CAs.
- Add and update documentation.
- Add support to Manilla for provisioning existing shares.
- Add cluster name to load balancer description
- Add synchronization between Kubernetes and Keystone projects
- Add use internal DNS name for 'hostname' of nodes.
- Add support for CSI spec v0.3.0 for both Cinder and Manilla
- Add 'cascade delete' support for Octavia load balancers to improve performance.
- Add improved load balancer naming.

SIG-scheduling

SIG Scheduling development efforts have been primarily focused on improving performance and reliability of the scheduler.

- Performance of the inter-pod affinity/anti-affinity feature is improved over 100X via algorithmic optimization.
- DaemonSet pods, which used to be scheduled by the DaemonSet controller, will be scheduled by the default scheduler in 1.12. This change allows DaemonSet pods to enjoy all the scheduling features of the default scheduler.
- The Image Locality priority function of the scheduler has been improved and is now enabled by default. With this feature enabled, nodes that have all or a partial set of images required for running a pod are preferred over other nodes, which improves pod start-up time.
- TaintNodeByCondition has been moved to Beta and is enabled by default.
- Scheduler throughput has been improved by ~50% in large clusters (>2000 nodes).

SIG-service-catalog

- The Originating Identity feature, which lets the broker know which user that performed an action, is now GA.
- Namespaced Brokers, which enable operators to install a broker into a namespace instead of the cluster level, reached GA.
- The Service Plan Defaults feature is in alpha and is under active development. This feature gives operators the ability to define defaults for when someone provisions a service.
- We now support filtering which services are exposed by Service Catalog.
- We have also Improved the CLI experience both for kubectl and svcat by improving the output formatting, and by adding more commands.

SIG-storage

SIG Storage promoted the Kubernetes volume topology feature to beta. This enables Kubernetes to understand and act intelligently on volume accessibility information (such as the “zone” a cloud volume is provisioned in, the “rack” that a SAN array is accessible from, and so on).

The dynamic maximum volume count feature was also moved to beta. This enables a volume plugin to specify the maximum number of a given volume type per node as a function of the node characteristics (for example, a larger limit for larger nodes, a smaller limit for smaller nodes).

SIG Storage also worked on a number of Container Storage Interface (CSI) features this quarter in anticipation of moving support for CSI from beta to GA in the next Kubernetes release. This includes graduating the dependent “mount namespace propagation” feature to GA, moving the Kubelet plugin registration mechanism to beta, adding alpha support for a new CSI driver registry as well as for topology, and adding a number of alpha features to support the use of CSI for “local ephemeral volumes” (that is, volumes that exist for the lifecycle of a pod and contain some injected information, like a token or secret).

With Kubernetes v1.12, SIG Storage also introduced alpha support for volume snapshotting. This feature introduces the ability to create/delete volume snapshots and create new volumes from a snapshot using the Kubernetes API.

SIG-vmware

SIG-VMware development was primarily focused on fixing bugs for the in-tree cloud provider, starting the development of the external cloud provider and taking ownership of the cluster-api provider for vSphere.

In-tree cloud provider bug fixes and improvements included:

- Adding initial Zones support to the provider using vSphere Tags
- Improving the testing harness for the cloud provider by introducing vcsim for automated testing
- Fixing a bug that was preventing updates from 1.10 to 1.11

The external cloud provider was established and reached feature parity with in-tree, and we expect to stabilize it and have it as preferred deployment model by 1.13. We are also getting started on externalizing the vSphere volume functionalities in a CSI plugin to fully reproduce the current in-tree storage functionality.

The Cluster API effort is currently undergoing a complete rehaul of the existing codebase, moving off Terraform and into using govmomi directly.

SIG-windows

SIG Windows focused on stability and reliability of our existing feature set. We primarily fixed bugs as we march towards a near future stable release.

Action Required

- etcd2 as a backend is deprecated and support will be removed in Kubernetes 1.13.
- The --storage-versions flag of kube-apiserver is now deprecated. This flag should be omitted to ensure the default storage versions are used. Otherwise the cluster is not safe to upgrade to a version newer than 1.12. This flag will be removed in 1.13. (#68080, @caesarxuchao) Courtesy of SIG API Machinery
- Volume dynamic provisioning scheduling has been moved to beta, which means that the DynamicProvisioningScheduling alpha feature gate has been removed but the VolumeScheduling beta feature gate is still required for this feature. (#67432, @lichuqiang) Courtesy of SIG Apps, SIG Architecture, SIG Storage, and SIG Testing
- The API server and client-go libraries have been fixed to support additional non-alpha-numeric characters in UserInfo "extra" data keys. Both should be updated in order to properly support extra data containing "/" characters or other characters disallowed in HTTP headers. (#65799, @dekkagaijin) Courtesy of SIG Auth
- The `NodeConfiguration` kind in the kubeadm v1alpha2 API has been renamed `JoinConfiguration` in v1alpha3 (#65951, @luxas) Courtesy of SIG Cluster Lifecycle
- The `MasterConfiguration` kind in the kubeadm v1alpha2 API has been renamed `InitConfiguration` in v1alpha3 (#65945, @luxas) Courtesy of SIG Cluster Lifecycle
- The formerly publicly-available cAdvisor web UI that the kubelet started using `--cadvisor-port` has been entirely removed in 1.12. The recommended way to run cAdvisor if you still need it, is via a DaemonSet. (#65707, @dims)
- Cluster Autoscaler version has been updated to 1.3.1-beta.1. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.3.1-beta.1 (#65857, @aleksandra-malinowska) Courtesy of SIG Autoscaling
- kubeadm: The `v1alpha1` config API has been removed. (#65628, @luxas) Courtesy of SIG Cluster Lifecycle
- kube-apiserver: When using `--enable-admission-plugins` the `Priority` admission plugin is now enabled by default (matching changes in 1.11.1+). If using `--admission-control` to fully specify the set of admission plugins, it is now necessary to add the `Priority` admission plugin for the PodPriority feature to work properly. (#65739, @liggitt) Courtesy of SIG Scheduling
- The `system-node-critical` and `system-cluster-critical` priority classes are now limited to the `kube-system` namespace by the `PodPriority` admission plugin (matching changes in 1.11.1+). (#65593, @bsalamat) Courtesy of SIG Scheduling
- kubeadm: Control plane images (etcd, kube-apiserver, kube-proxy, etc.) no longer use arch suffixes. Arch suffixes are kept for kube-dns only. (#66960, @rosti) Courtesy of SIG Cluster Lifecycle, SIG Release, and SIG Testing

- kubeadm - Feature-gates HighAvailability, SelfHosting, CertsInSecrets are now deprecated and can no longer be used for new clusters. Cluster updates using above feature-gates flag is not supported. (#67786, @fabriziopandini) Courtesy of SIG Cluster Lifecycle
- 'KubeSchedulerConfiguration' which used to be under GroupVersion 'componentconfig/v1alpha1', is now under 'kubescheduler.config.k8s.io/v1alpha1'. (#66916, @dixudx) Courtesy of SIG Cluster Lifecycle, SIG Scheduling, and SIG Testing
- The flag `--skip-preflight-checks` of kubeadm has been removed. Please use `--ignore-preflight-errors` instead. (#62727, @xiangpengzhao)
- If Openstack LoadBalancer is not defined in cloud config, the loadbalancer will no longer beis not initialized. any more in openstack. All setups must have some setting under that section for the OpenStack provider. (#65781, @zetaab)

Deprecations and removals

- Kubeadm: The Alpha feature-gates HighAvailability, SelfHosting, CertsInSecrets are now deprecated, and will be removed in k8s v1.13.0.
- The cloudstack and ovirt controllers have been deprecated and will be removed in a future version. (#68199, @dims)
- All kubectl run generators have been deprecated except for run-pod/v1. This is part of a move to make `kubectl run` simpler, enabling it create only pods; if additional resources are needed, you should use `kubectl create` instead. (#68132, @soltysh)
- The deprecated --interactive flag has been removed from kubectl logs. (#65420, @jsoref)
- The deprecated shorthand flag `-c` has been removed from `kubectl version (--client)` . (#66817, @charrywanganthony)
- The `--pod` flag (`-p` shorthand) of the kubectl exec command has been marked as deprecated, and will be removed in a future version. This flag is currently optional. (#66558, @quasoft)
- kubectl: `--use-openapi-print-columns` has been deprecated in favor of `--server-print` , and will be removed in a future version. (#65601, @liggitt)
- The watch API endpoints prefixed with `/watch` are deprecated and will be removed in a future release. These standard method for watching resources (supported since v1.0) is to use the list API endpoints with a `?watch=true` parameter. All client-go clients have used the parameter method since v1.6.0. (#65147, @liggitt)
- Using the Horizontal Pod Autoscaler with metrics from Heapster is now deprecated and will be disabled in a future version. (#68089, @DirectXMan12)

New Features

- Kubernetes now registers volume topology information reported by a node-level Container Storage Interface (CSI) driver. This enables Kubernetes support of CSI topology mechanisms. (#67684, @verult) Courtesy of SIG API Machinery, SIG Node, SIG Storage, and SIG Testing
- Addon-manager has been bumped to v8.7 (#68299, @MrHohn) Courtesy of SIG Cluster Lifecycle, and SIG Testing
- The CSI volume plugin no longer needs an external attacher for non-attachable CSI volumes. (#67955, @jsafrane) Courtesy of SIG API Machinery, SIG Node, SIG Storage, and SIG Testing
- KubeletPluginsWatcher feature graduated to beta. (#68200, @RenaudWasTaken) Courtesy of SIG Node, SIG Storage, and SIG Testing
- A TTL mechanism has been added to clean up Jobs after they finish. (#66840, @janetkuo) Courtesy of SIG API Machinery, SIG Apps, SIG Architecture, and SIG Testing
- The scheduler is now optimized to throttle computational tasks involved with node selection. (#67555, @wgliang) Courtesy of SIG API Machinery, and SIG Scheduling

- The performance of Pod affinity/anti-affinity in the scheduler has been improved. (#67788, @ahmad-diaa) Courtesy of SIG Scalability, and SIG Scheduling
- A kubelet parameter and config option has been added to change the CFS quota period from the default 100ms to some other value between 1µs and 1s. This was done to improve response latencies for workloads running in clusters with guaranteed and burstable QoS classes. (#63437, @szuecs) Courtesy of SIG API Machinery, SIG Apps, SIG Architecture, SIG CLI,, SIG Node, and SIG Scheduling
- Secure serving on port 10258 to cloud-controller-manager (configurable via `--secure-port`) is now enabled. Delegated authentication and authorization are to be configured using the same flags as for aggregated API servers. Without configuration, the secure port will only allow access to `/healthz`. (#67069, @sttts) Courtesy of SIG Auth, and SIG Cloud Provider
- The commands `kubeadm alpha phases renew <cert-name>` have been added. (#67910, @liztio) Courtesy of SIG API Machinery, and SIG Cluster Lifecycle
- ProcMount has been added to SecurityContext and AllowedProcMounts has been added to PodSecurityPolicy to allow paths in the container's /proc to not be masked. (#64283, @jessfraz) Courtesy of SIG API Machinery, SIG Apps, SIG Architecture, and SIG Node
- Secure serving on port 10257 to kube-controller-manager (configurable via `--secure-port`) is now enabled. Delegated authentication and authorization are to be configured using the same flags as for aggregated API servers. Without configuration, the secure port will only allow access to `/healthz`. (#64149, @sttts) Courtesy of SIG API Machinery, SIG Auth, SIG Cloud Provider, SIG Scheduling, and SIG Testing
- Azure cloud provider now supports unmanaged nodes (such as on-prem) that are labeled with `kubernetes.azure.com/managed=false` and `alpha.service-controller.kubernetes.io/exclude-balancer=true` (#67984, @feiskyer) Courtesy of SIG Azure, and SIG Cloud Provider
- SCTP is now supported as an additional protocol (alpha) alongside TCP and UDP in Pod, Service, Endpoint, and NetworkPolicy. (#64973, @janosi) Courtesy of SIG API Machinery, SIG Apps, SIG Architecture, SIG CLI, SIG Cloud Provider, SIG Cluster Lifecycle, SIG Network, SIG Node, and SIG Scheduling
- Autoscaling/v2beta2 and custom_metrics/v1beta2 have been introduced, which implement metric selectors for Object and Pods metrics, as well as allowing AverageValue targets on Objects, similar to External metrics. (#64097, @damemi) Courtesy of SIG API Machinery, SIG Architecture, SIG Autoscaling, SIG CLI, and SIG Testing
- kubelet: Users can now enable the alpha NodeLease feature gate to have the Kubelet create and periodically renew a Lease in the kube-node-lease namespace. The lease duration defaults to 40s, and can be configured via the kubelet.config.k8s.io/v1beta1.KubeletConfiguration's NodeLeaseDurationSeconds field. (#66257, @mtaufen) Courtesy of SIG API Machinery, SIG Apps, SIG Architecture, SIG Cluster Lifecycle, SIG Node, and SIG Testing
- PodReadinessGate is now turned on by default. (#67406, @freehan) Courtesy of SIG Node
- Azure cloud provider now supports cross resource group nodes that are labeled with `kubernetes.azure.com/resource-group=<rg-name>` and `alpha.service-controller.kubernetes.io/exclude-balancer=true` (#67604, @feiskyer) Courtesy of SIG Azure, SIG Cloud Provider, and SIG Storage
- Annotations are now supported for remote admission webhooks. (#58679, @CaoShuFeng) Courtesy of SIG API Machinery, and SIG Auth
- The scheduler now scores fewer than all nodes in every scheduling cycle. This can improve performance of the scheduler in large clusters. (#66733, @bsalamat) Courtesy of SIG Scheduling
- Node affinity for Azure unzoned managed disks has been added. (#67229, @feiskyer) Courtesy of SIG Azure
- The Attacher/Detacher interfaces for local storage have been refactored (#66884, @NickrenREN) Courtesy of SIG Storage
- DynamicProvisioningScheduling and VolumeScheduling is now supported for Azure managed disks. Feature gates DynamicProvisioningScheduling and VolumeScheduling should be enabled before using this feature.

(#67121, @feiskyer) Courtesy of SIG Azure, and SIG Storage

- The audit.k8s.io api group has been upgraded from v1beta1 to v1. (#65891, @CaoShuFeng) Courtesy of SIG API Machinery
- The quota admission configuration API graduated to v1beta1. (#66156, @vikaschoudhary16) Courtesy of SIG Node, and SIG Scheduling
- Kube-apiserver --help flag help is now printed in sections. (#64517, @sttts)
- Azure managed disks now support availability zones and new parameters `zoned`, `zone` and `zones` are added for AzureDisk storage class. (#66553, @feiskyer) Courtesy of SIG Azure
- Kubectl create job command has been added. (#60316, @soltysh) Courtesy of SIG CLI
- Kubelet serving certificate bootstrapping and rotation has been promoted to beta status. (#66726, @liggitt) Courtesy of SIG Auth, and SIG Node
- Azure nodes with availability zone will now have label `failure-domain.beta.kubernetes.io/zone=<region>-<zoneID>`. (#66242, @feiskyer) Courtesy of SIG Azure
- kubeadm: Default component configs are now printable via kubeadm config print-default (#66074, @rosti) Courtesy of SIG Cluster Lifecycle
- Mount propagation has been promoted to GA. The `MountPropagation` feature gate is deprecated and will be removed in 1.13. (#67255, @bertinatto) Courtesy of SIG Apps, SIG Architecture, SIG Node, and SIG Storage
- Ubuntu 18.04 (Bionic) series has been added to Juju charms (#65644, @tvansteenburgh)
- kubeadm: The kubeadm configuration now supports the definition of more than one control plane instances with their own APIEndpoint. The APIEndpoint for the "bootstrap" control plane instance should be defined using `InitConfiguration.APIEndpoint`, while the APIEndpoints for additional control plane instances should be added using `JoinConfiguration.APIEndpoint`. (#67832, @fabriziopandini)
- Add new `--server-dry-run` flag to `kubectl apply` so that the request will be sent to the server with the dry-run flag (alpha), which means that changes won't be persisted. (#68069, @apelisse)
- Introduce CSI Cluster Registration mechanism to ease CSI plugin discovery and allow CSI drivers to customize Kubernetes' interaction with them. (#67803, @saad-ali)
- The PodShareProcessNamespace feature to configure PID namespace sharing within a pod has been promoted to beta. (#66507, @verb)

API Changes

- kubeadm now supports the phase command "alpha phase kubelet config annotate-cri". (#68449, @fabriziopandini)
- kubeadm: --cri-socket now defaults to tcp://localhost:2375 when running on Windows. (#67447, @benmoss)
- kubeadm now includes a new EXPERIMENTAL `--rootfs`, which (if specified) causes kubeadm to chroot before performing any file operations. This is expected to be useful when setting up kubernetes on a different filesystem, such as invoking kubeadm from docker. (#54935, @anguslees)
- The command line option --cri-socket-path of the kubeadm subcommand "kubeadm config images pull" has been renamed to --cri-socket to be consistent with the rest of kubeadm subcommands.
- kubeadm: The ControlPlaneEndpoint was moved from the API config struct to ClusterConfiguration (#67830, @fabriziopandini)
- kubeadm: InitConfiguration now consists of two structs: InitConfiguration and ClusterConfiguration (#67441, @rosti)
- The RuntimeClass API has been added. This feature is in alpha, and the RuntimeClass feature gate must be enabled in order to use it. The RuntimeClass API resource defines different classes of runtimes that may be used to run containers in the cluster. Pods can select a RuntimeClass to use via the RuntimeClassName field. (#67737, @tallclair)

- To address the possibility of dry-run requests overwhelming admission webhooks that rely on side effects and a reconciliation mechanism, a new field is being added to `admissionregistration.k8s.io/v1beta1.ValidatingWebhookConfiguration` and `admissionregistration.k8s.io/v1beta1.MutatingWebhookConfiguration` so that webhooks can explicitly register as having dry-run support. If a dry-run request is made on a resource that triggers a non dry-run supporting webhook, the request will be completely rejected, with "400: Bad Request". Additionally, a new field is being added to the `admission.k8s.io/v1beta1.AdmissionReview` API object, exposing to webhooks whether or not the request being reviewed is a dry-run. (#66936, @jennybuckley)
- CRI now supports a "runtime_handler" field for RunPodSandboxRequest, used for selecting the runtime configuration to run the sandbox with (alpha feature). (#67518, @tallclair)
- More fields are allowed at the root of the CRD validation schema when the status subresource is enabled. (#65357, @nikhita)
- The --docker-disable-shared-pid kubelet flag has been removed. PID namespace sharing can instead be enable per-pod using the ShareProcessNamespace option. (#66506, @verb)
- Added the --dns-loop-detect option to dnsmasq, which is run by kube-dns. (#67302, @dixudx)
- Kubernetes now supports extra `--prune-whitelist` resources in kube-addon-manager. (#67743, @Random-Liu)
- Graduate Resource Quota ScopeSelectors to beta, and enable it by default. (#67077, @vikaschoudhary16)
- The OpenAPI spec and documentation now reflect the 202 Accepted response path for delete requests. Note that this change in the openapi spec may affect some clients that depend on the error paths. (#63418, @roycaihw)
- The alpha `Initializers` admission plugin is no longer enabled by default. This matches the off-by-default behavior of the alpha API which drives initializer behavior. (#66039, @liggitt)
- Adding validation to kube-scheduler at the API level (#66799, @noqcks)
- `DisruptedPods` field in `PodDisruptionBudget` is optional instead of required. (#63757, @nak3)

Other Notable Changes

SIG API Machinery

- `kubectl get apiservice` now shows the target service and whether the service is available (#67747, @smarterclayton)
- Apiserver panics will now be returned as 500 errors rather than terminating the apiserver process. (#68001, @sttts)
- API paging is now enabled for custom resource definitions, custom resources and APIService objects. (#67861, @liggitt)
- To address the possibility dry-run requests overwhelming admission webhooks that rely on side effects and a reconciliation mechanism, a new field is being added to admissionregistration.k8s.io/v1beta1.ValidatingWebhookConfiguration and admissionregistration.k8s.io/v1beta1.MutatingWebhookConfiguration so that webhooks can explicitly register as having dry-run support. If a dry-run request is made on a resource that triggers a non dry-run supporting webhook, the request will be completely rejected, with "400: Bad Request". Additionally, a new field is being added to the admission.k8s.io/v1beta1.AdmissionReview API object, exposing to webhooks whether or not the request being reviewed is a dry-run. (#66936, @jennybuckley)
- kube-apiserver now includes all registered API groups in discovery, including registered extension API group/versions for unavailable extension API servers. (#66932, @nilebox)
- kube-apiserver: setting a `dryRun` query parameter on a CONNECT request will now cause the request to be rejected, consistent with behavior of other mutating API requests. Examples of CONNECT APIs are the `nodes/proxy`, `services/proxy`, `pods/proxy`, `pods/exec`, and `pods/attach` subresources.

Note that this prevents sending a `dryRun` parameter to backends via `{nodes,services,pods}/proxy` subresources. (#66083, @jennybuckley)

- In clusters where the DryRun feature is enabled, dry-run requests will go through the normal admission chain. Because of this, ImagePolicyWebhook authors should especially make sure that their webhooks do not rely on side effects. (#66391, @jennybuckley)
- Added etcd_object_count metrics for CustomResources. (#65983, @sttts)
- The OpenAPI version field will now be properly autopopulated without needing other OpenAPI fields present in generic API server code. (#66411, @DirectXMan12)
- TLS timeouts have been extended to work around slow arm64 math/big functions. (#66264, @joejulian)
- Kubernetes now checks CREATE admission for create-on-update requests instead of UPDATE admission. (#65572, @yue9944882)
- kube- and cloud-controller-manager can now listen on ports up to 65535 rather than 32768, solving problems with operating systems that request these higher ports.. (#65860, @sttts)
- LimitRange and Endpoints resources can be created via an update API call if the object does not already exist. When this occurs, an authorization check is now made to ensure the user making the API call is authorized to create the object. In previous releases, only an update authorization check was performed. (#65150, @jennybuckley)
- More fields are allowed at the root of the CRD validation schema when the status subresource is enabled. (#65357, @nikhita)
- api-machinery utility functions `SetTransportDefaults` and `DialerFor` once again respect custom Dial functions set on transports (#65547, @liggitt)
- AdvancedAuditing has been promoted to GA, replacing the previous (legacy) audit logging mechanisms. (#65862, @loburm)
- Added --authorization-always-allow-paths to components doing delegated authorization to exclude certain HTTP paths like /healthz from authorization. (#67543, @sttts)
- Allow ImageReview backend to return annotations to be added to the created pod. (#64597, @wteiken)
- Upon receiving a LIST request with an expired continue token, the apiserver now returns a continue token together with the 410 "the from parameter is too old" error. If the client does not care about getting a list from a consistent snapshot, the client can use this token to continue listing from the next key, but the returned chunk will be from the latest snapshot. (#67284, @caesarxuchao)

SIG Apps

- The service controller will now retry creating the load balancer when `persistUpdate` fails due to conflict. (#68087, @grayluck)
- The latent controller caches no longer cause repeating deletion messages for deleted pods. (#67826, @deads2k)

SIG Auth

- TokenRequest and TokenRequestProjection are now beta features. To enable these feature, the API server needs to be started with the `--service-account-issuer`, `--service-account-signing-key-file`, and `--service-account-api-audiences` flags. (#67349, @mikedanese)
- The admin RBAC role now aggregates edit and view. The edit RBAC role now aggregates view. (#66684, @deads2k)
- UserInfo derived from service account tokens created from the TokenRequest API now include the pod name and UID in the Extra field. (#61858, @mikedanese)
- The extension API server can now dynamically discover the requestheader CA certificate when the core API server doesn't use certificate based authentication for it's clients. (#66394, @rtripat)

SIG Autoscaling

- Horizontal Pod Autoscaler default update interval has been increased from 30s to 15s, improving HPA reaction time for metric changes. (#68021, @krzysztof-jastrzebski)
- To avoid soft-deleted pods incorrectly affecting scale up replica count calculations, the HPA controller will stop counting soft-deleted pods for scaling purposes. (#67067, @moonek)
- HPA reaction to metric changes has been spend up by removing the scale up forbidden window. (#66615, @jbartosik)

SIG AWS

- AWS LoadBalancer security group ICMP rules now match the documentation of spec.loadBalancerSourceRanges (#63572, @haz-mat)
- The aws cloud provider now reports a `Hostname` address type for nodes based on the `local-hostname` metadata key. (#67715, @liggitt)

SIG Azure

- \API calls for Azure instance metadata have been reduced to help avoid "too many requests" errors.. (#67478, @feiskyer)
- Azure Go SDK has been upgraded to v19.0.0 and VirtualMachineScaleSetVM now supports availability zones. (#66648, @feiskyer)
- User Assigned MSI (https://docs.microsoft.com/en-us/azure/active-directory/managed-service-identity/overview), which provides for managed identities, is now suppored for Kubernetes clusters on Azure. (#66180, @kkmsft)
- The Azure load balancer idle connection timeout for services is now configurable.(#66045, @cpuguy83)
- When provisioning workloads, Kubernetes will now skip nodes that have a primary NIC in a 'Failed' provisioningState. (#65412, @yastij)
- The NodeShutdown taint is now supported for Azure. (#68033, @yastij)

SIG CLI

- Added a sample-cli-plugin staging repository and cli-runtime staging repository to help showcase the new kubectl plugins mechanism. (#67938, #67658, @soltysh)
- The plugin mechanism functionality now closely follows the git plugin design (#66876, @juanvallejo)
- kubectl patch now respects --local (#67399, @deads2k)
- kubectl: When an object can't be updated and must be deleted by force, kubectl will now recreating resources for immutable fields.(#66602, @dixudx)
- `kubectl create {clusterrole,role}` 's `--resources` flag now supports asterisk to specify all resources. (#62945, @nak3)
- kubectl: the wait command now prints an error message and exits with the code 1, if there is no resources matching selectors (#66692, @m1kola)
- Kubectl now handles newlines for `command` , `args` , `env` , and `annotations` in `kubectl describe` wrapping. (#66841, @smarterclayton)
- The `kubectl patch` command no longer exits with exit code 1 when a redundant patch results in a no-op (#66725, @juanvallejo)
- The output of `kubectl get events` has been improved to prioritize showing the message, and to move some fields to `-o wide` . (#66643, @smarterclayton)
- `kubectl config set-context` can now set attributes of the current context, such as the current namespace, by passing `--current` instead of a specific context name (#66140, @liggitt)
- "kubectl delete" no longer waits for dependent objects to be deleted when removing parent resources (#65908, @juanvallejo)
- A new flag, `--keepalive` , has been introduced, for kubectl proxy to allow setting keep-alive period for long-running request. (#63793, @hzxuzhonghu)

- kubectl: fixed a regression with --use-openapi-print-columns that would not print object contents (#65600, @liggitt)
- The display of jobs in `kubectl get` and `kubectl describe` has been improved to emphasize progress and duration. (#65463, @smarterclayton)
- CSI volume attributes have been added to kubectl describe pv. (#65074, @wgliang)
- Running `kubectl describe pvc` now shows which pods are mounted to the pvc being described with the `Mounted By` field (#65837, @clandry94)
- `kubectl create secret tls` can now read certificate and key files from process substitution arguments (#67713, @liggitt)
- `kubectl rollout status` now works for unlimited timeouts. (#67817, @tnozicka)

SIG Cloud Provider

- The cloudstack cloud provider now reports a `Hostname` address type for nodes based on the `local-hostname` metadata key. (#67719, @liggitt)
- The OpenStack cloud provider now reports a `Hostname` address type for nodes (#67748, @FengyunPan2)
- The vSphere cloud provider now suppoerts zones. (#66795, @jiatongw)

SIG Cluster Lifecycle

- External CAs can now be used for kubeadm with only a certificate, as long as all required certificates already exist. (#68296, @liztio)
- kubeadm now works better when not connected to the Internet. In addition, common kubeadm commands will now work without an available networking interface. (#67397, @neolit123)
- Scrape frequency of metrics-server has been increased to 30s.(#68127, @serathius)
- Kubernetes juju charms will now use CSI for ceph. (#66523, @hyperbolic2346)
- kubeadm uses audit policy v1 instead of v1beta1 (#67176, @charrywanganthony)
- Kubeadm nodes will no longer be able to run with an empty or invalid hostname in /proc/sys/kernel/hostname (#64815, @dixudx)
- kubeadm now can join the cluster with pre-existing client certificate if provided (#66482, @dixudx)
- kubeadm will no longer hang indefinitely if there is no Internet connection and --kubernetes-version is not specified.(#65676, @dkoshkin)
- kubeadm: kube-proxy will now run on all nodes, and not just master nodes.(#65931, @neolit123)
- kubeadm now uses separate YAML documents for the kubelet and kube-proxy ComponentConfigs. (#65787, @luxas)
- kubeadm will now print required flags when running `kubeadm upgrade plan` .(#65802, @xlgao-zju)
- Unix support for ZFS as a valid graph driver has been added for Docker, enabling users to use Kubeadm with ZFS. (#65635, @neolit123)

SIG GCP

- GCE: decrease cpu requests on master node, to allow more components to fit on one core machine. (#67504, @loburm)
- Kubernetes 1.12 includes a large number of metadata agent improvements, including expanding the metadata agent's access to all API groups and removing metadata agent config maps in favor of command line flags. It also includes improvements to the logging agent, such as multiple fixes and adjustments. (#66485, @bmoyles0117)
- cluster/gce: Kubernetes now generates consistent key sizes in config-default.sh using /dev/urandom instead of /dev/random (#67139, @yogi-sagar)

SIG Instrumentation

The etcdv3 client can now be monitored by Prometheus. (#64741, @wgliang)

SIG Network

- The ip-masq-agent will now be scheduled in all nodes except master due to NoSchedule/NoExecute tolerations. (#66260, @tanshanshan)
- The CoreDNS service can now be monitored by Prometheus. (#65589, @rajansandeep)
- Traffic shaping is now supported for the CNI network driver. (#63194, @m1093782566)
- The dockershim now sets the "bandwidth" and "ipRanges" CNI capabilities (dynamic parameters). Plugin authors and administrators can now take advantage of this by updating their CNI configuration file. For more information, see the CNI docs (#64445, @squeed)

SIG Node

- RuntimeClass is a new API resource for defining different classes of runtimes that may be used to run containers in the cluster. Pods can select a RunitmeClass to use via the RuntimeClassName field. This feature is in alpha, and the RuntimeClass feature gate must be enabled in order to use it. (#67737, @tallclair)
- Sped up kubelet start time by executing an immediate runtime and node status update when the Kubelet sees that it has a CIDR. (#67031, @krzysztof-jastrzebski)
- cpumanager will now rollback state if updateContainerCPUSet failed, indicating that the container start failed. This change will prevent CPU leaks. (#67430, @choury)
- [CRI] RunPodSandboxRequest now has a runtime_handler field for selecting the runtime configuration to run the sandbox with. This feature is in alpha for 1.12.. (#67518, @tallclair)
- If a container's requested device plugin resource hasn't registered after Kubelet restart, the container start will now fail.(#67145, @jiayingz)
- Upgraded TaintNodesByCondition to beta. (#62111, @k82cn)
- The PodShareProcessNamespace feature to configure PID namespace sharing within a pod has been promoted to beta. (#66507, @verb)
- The CPU Manager will now validate the state of the node, enabling Kubernetes to maintain the CPU topology even if resources change. (#66718, @ipuustin)
- Added support kubelet plugin watcher in device manager, as part of the new plugin system. (#58755, @vikaschoudhary16)
- Expose docker registry config for addons used in Juju deployments (#66092, @kwmonroe)
- `RunAsGroup` which has been broken since 1.10, now works. (#65926, @Random-Liu)
- The systemd config files are now reloaded before kubelet starts, so changes can take effect(#65702, @mborsz)
- Hostnames are now converted to lowercase before being used for node lookups in the kubernetes-worker charm. (#65487, @dshcherb)
- kubelets that specify `--cloud-provider` now only report addresses in Node status as determined by the cloud provider (unless `--hostname-override` is used to force reporting of the specified hostname) (#65594, @liggitt)
- Kubelet now exposes `/debug/flags/v` to allow dynamically setting glog logging level. For example, to change glog level to 3, you only have to send a PUT request like `curl -X PUT http://127.0.0.1:8080/debug/flags/v -d "3"` . (#64601, @hzxuzhonghu)

SIG OpenStack

- Openstack now supports the node shutdown taint. The taint is added when an instance is shutdown in openstack. (#67982, @zetaab)

SIG Scheduling

- The equivalence class cache has been redesigned to be a two level cache, resulting in a significant increase in scheduling throughput and performance. (#65714, @resouer)

- kube-scheduler can now listen on ports up to 65535, correcting a problem with certain operating systems that request ports greater than 32768. (#65833, @sttts)
- Performance of the anti-affinity predicate of the default scheduler has been improved. (#66948, @mohamed-mehany)
- The unreachable taint gets applied to a node when it loses its network connection. (#67734, @Huang-Wei)
- If `TaintNodesByCondition` is enabled, add `node.kubernetes.io/unschedulable` and `node.kubernetes.io/network-unavailable` automatically to DaemonSet pods. (#64954, @k82cn)

SIG Storage

- The AllowedTopologies field inside StorageClass is now validated against set and map semantics. Specifically, there cannot be duplicate TopologySelectorTerms, MatchLabelExpressions keys, or TopologySelectorLabelRequirement Values. (#66843, @verult)
- A PersistentVolumeClaim may not have been synced to the controller local cache in time if the PersistentVolumeis bound by an external PV binder (such as kube-scheduler), so Kubernetes will now double check if PVC is not found in order to prevent the volume from being incorrectly reclaimed. (#67062, @cofyc)
- Filesystems will now be properly unmounted when a backend is not reachable and returns EIO. (#67097, @chakri-nelluri)
- The logic for attaching volumes has been changed so that attachdetach controller attaches volumes immediately when a Pod's PVCs are bound, preventing a problem that caused pods to have extremely long startup times. (#66863, @cofyc)
- Dynamic provisions that create iSCSI PVs can now ensure that multipath is used by specifying 2 or more target portals in the PV, which will cause kubelet to wait up to 10 seconds for the multipath device. PVs with just one portal continue to work as before, with kubelet not waiting for the multipath device and just using the first disk it finds. (#67140, @bswartz)
- ScaleIO volumes can now be provisioned without having to first manually create /dev/disk/by-id path on each kubernetes node (if not already present). (#66174, @ddebroy)
- Multi-line annotations injected via downward API files will no longer be sorted, scrambling their information. (#65992, @liggitt)
- The constructed volume spec for the CSI plugin now includes a volume mode field. (#65456, @wenlxie)
- Kubernetes now includes a metric that reports the number of PVCs that are in-use,with plugin and node name as dimensions, making it possible to figure out how many PVCs each node is using when troubleshooting attach/detach issues. (#64527, @gnufied)
- Added support to restore a volume from a volume snapshot data source. (#67087, @xing-yang)
- When attaching iSCSI volumes, kubelet now scans only the specific LUNs being attached, and also deletes them after detaching. This avoids dangling references to LUNs that no longer exist, which used to be the cause of random I/O errors/timeouts in kernel logs, slowdowns during block-device related operations, and very rare cases of data corruption. (#63176, @bswartz)
- Both directory and block devices are now supported for local volume plugin FileSystem VolumeMode. (#63011, @NickrenREN)
- CSI NodePublish call can optionally contain information about the pod that requested the CSI volume. (#67945, @jsafrane)
- Added support for volume attach limits for CSI volumes. (#67731, @gnufied)

SIG VMWare

- The vmUUID is now preserved when renewing nodeinfo in the vSphere cloud provider. (#66007, @w-leads)
- You can now configure the vsphere cloud provider with a trusted Root-CA, enabling you to take advantage of TLS certificate rotation. (#64758, @mariantalla)

SIG Windows

- Kubelet no longer attempts to sync iptables on non-Linux systems.. (#67690, @feiskyer)
- Kubelet no longer applies default hard evictions of nodefs.inodesFree on non-Linux systems. (#67709, @feiskyer)
- Windows system container "pods" now support kubelet stats. (#66427, @feiskyer)

Other Notable Changes

Bug Fixes

- Update debian-iptables and hyperkube-base images to include CVE fixes. (#67365, @ixdy)
- Fix for resourcepool-path configuration in the vsphere.conf file. (#66261, @divyenpatel)
- This fix prevents a GCE PD volume from being mounted if the udev device link is stale and tries to correct the link. (#66832, @msau42)
- Fix controller-manager crashes when flex plugin is removed from flex plugin directory (#65536, @gnufied)
- Fix local volume directory can't be deleted because of volumeMode error (#65310, @wenlxie)
- bugfix: Do not print feature gates in the generic apiserver code for glog level 0 (#65584, @neolit123)
- Fix an issue that pods using hostNetwork keep increasing. (#67456, @Huang-Wei)
- fixes an out of range panic in the NoExecuteTaintManager controller when running a non-64-bit build (#65596, @liggitt)
- Fix kubelet to not leak goroutines/intofiy watchers on an inactive connection if it's closed (#67285, @yujuhong)
- Fix pod launch by kubelet when --cgroups-per-qos=false and --cgroup-driver="systemd" (#66617, @pravisankar)
- Fixed a panic in the node status update logic when existing node has nil labels. (#66307, @guoshimin)
- Fix the bug where image garbage collection is disabled by mistake. (#66051, @jiaxuanzhou)
- Fix a bug that preempting a pod may block forever. (#65987, @Random-Liu)
- fixes the errors/warnings in fluentd configuration (#67947, @saravanan30erd)
- Fixed an issue which prevented `gcloud` from working on GCE when metadata concealment was enabled. (#66630, @dekkagaijin)
- Fix Stackdriver integration based on node annotation container.googleapis.com/instance_id. (#66676, @kawych)
- GCE: Fixes loadbalancer creation and deletion issues appearing in 1.10.5. (#66400, @nicksardo)
- Fixed exception detection in fluentd-gcp plugin. (#65361, @xperimental)
- kubeadm: Fix panic when node annotation is nil (#67648, @xlgao-zju)
- kubeadm: stop setting UID in the kubelet ConfigMap (#66341, @runiq)
- bazel deb package bugfix: The kubeadm deb package now reloads the kubelet after installation (#65554, @rdodev)
- fix cluster-info dump error (#66652, @charrywanganthony)
- Fix kubelet startup failure when using ExecPlugin in kubeconfig (#66395, @awly)
- kubectl: fixes a panic displaying pods with nominatedNodeName set (#66406, @liggitt)
- prevents infinite CLI wait on delete when item is recreated (#66136, @deads2k)
- Fix 'kubectl cp' with no arguments causes a panic (#65482, @wgliang)
- Fixes the wrong elasticsearch node counter (#65627, @IvanovOleg)
- Fix an issue with dropped audit logs, when truncating and batch backends enabled at the same time. (#65823, @loburm)
- DaemonSet: Fix bug- daemonset didn't create pod after node have enough resource (#67337, @linyouchong)
- DaemonSet controller is now using backoff algorithm to avoid hot loops fighting with kubelet on pod recreation when a particular DaemonSet is misconfigured. (#65309, @tnozicka)
- Avoid creating new controller revisions for statefulsets when cache is stale (#67039, @mortent)
- Fixes issue when updating a DaemonSet causes a hash collision. (#66476, @mortent)

- fix rollout status for statefulsets (#62943, @faraazkhan)
- fixes a validation error that could prevent updates to StatefulSet objects containing non-normalized resource requests (#66165, @liggitt)
- Headless Services with no ports defined will now create Endpoints correctly, and appear in DNS. (#67622, @thockin)
- Prevent `resourceVersion` updates for custom resources on no-op writes. (#67562, @nikhita)
- kube-controller-manager can now start the quota controller when discovery results can only be partially determined. (#67433, @deads2k)
- Immediately close the other side of the connection when proxying. (#67288, @MHBauer)
- kube-apiserver: fixes error creating system priority classes when starting multiple apiservers simultaneously (#67372, @tanshanshan)
- Forget rate limit when CRD establish controller successfully updated CRD condition (#67370, @yue9944882)
- fixes a panic when using a mutating webhook admission plugin with a DELETE operation (#66425, @liggitt)
- Fix creation of custom resources when the CRD contains non-conventional pluralization and subresources (#66249, @deads2k)
- Aadjusted http/2 buffer sizes for apiservers to prevent starvation issues between concurrent streams (#67902, @liggitt)
- Fixed a bug that was blocking extensible error handling when serializing API responses error out. Previously, serialization failures always resulted in the status code of the original response being returned. Now, the following behavior occurs: (#67041, @tristanburgess)
- Fixes issue where pod scheduling may fail when using local PVs and pod affinity and anti-affinity without the default StatefulSet OrderedReady pod management policy (#67556, @msau42)
- Fix panic when processing Azure HTTP response. (#68210, @feiskyer)
- Fix volume limit for EBS on m5 and c5 instance types (#66397, @gnufied)
- Fix a bug on GCE that /etc/crictl.yaml is not generated when crictl is preloaded. (#66877, @Random-Liu)
- Revert #63905: Setup dns servers and search domains for Windows Pods. DNS for Windows containers will be set by CNI plugins. (#66587, @feiskyer)
- Fix validation for HealthzBindAddress in kube-proxy when --healthz-port is set to 0 (#66138, @wsong)
- Fixes issue #68899 where pods might schedule on an unschedulable node. (#68984, @k82cn)

Not Very Notable (that is, non-user-facing)

- Unit tests have been added for scopes and scope selectors in the quota spec (#66351, @vikaschoudhary16) Courtesy of SIG Node, and SIG Scheduling
- kubelet v1beta1 external ComponentConfig types are now available in the `k8s.io/kubelet` repo (#67263, @luxas) Courtesy of SIG Cluster Lifecycle, SIG Node, SIG Scheduling, and SIG Testing
- Use sync.map to scale ecache better (#66862, @resouer)
- Extender preemption should respect IsInterested() (#66291, @resouer)
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63665, @xchapter7x)
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63666, @xchapter7x)
- Re-adds `pkg/generated/bindata.go` to the repository to allow some parts of k8s.io/kubernetes to be go-vendorable. (#65985, @ixdy)
- If `TaintNodesByCondition` enabled, taint node with `TaintNodeUnschedulable` when initializing node to avoid race condition. (#63955, @k82cn)
- Remove rescheduler since scheduling DS pods by default scheduler is moving to beta. (#67687, @Lion-Wei)
- kubeadm: make sure pre-pulled kube-proxy image and the one specified in its daemon set manifest are the same (#67131, @rosti)
- kubeadm: remove misleading error message regarding image pulling (#66658, @dixudx)
- kubeadm: Pull sidecar and dnsmasq-nanny images when using kube-dns (#66499, @rosti)
- kubeadm: Fix pause image to not use architecture, as it is a manifest list (#65920, @dims)
- kubeadm: Remove usage of `PersistentVolumeLabel` (#65827, @xlgao-zju)

- kubeadm: Add a `v1alpha3` API. This change creates a v1alpha3 API that is initially a duplicate of v1alpha2. (#65629, @luxas)
- Improved error message when checking the rollout status of StatefulSet with OnDelete strategy type. (#66983, @mortent)
- Defaults for file audit logging backend in batch mode changed: (#67223, @tallclair)
- Role, ClusterRole and their bindings for cloud-provider is put under system namespace. Their addonmanager mode switches to EnsureExists. (#67224, @grayluck)
- Don't let aggregated apiservers fail to launch if the external-apiserver-authentication configmap is not found in the cluster. (#67836, @sttts)
- Always create configmaps/extensions-apiserver-authentication from kube-apiserver. (#67694, @sttts)
- Switched certificate data replacement from "REDACTED" to "DATA+OMITTED" (#66023, @ibrasho)
- Decrease the amount of time it takes to modify kubeconfig files with large amounts of contexts (#67093, @juanvallejo)
- Make EBS volume expansion faster (#66728, @gnufied)
- Remove unused binary and container image for kube-aggregator. The functionality is already integrated into the kube-apiserver. (#67157, @dims)
- kube-controller-manager now uses the informer cache instead of active pod gets in HPA controller (#68241, @krzysztof-jastrzebski)
- Replace scale down forbidden window with scale down stabilization window. Rather than waiting a fixed period of time between scale downs HPA now scales down to the highest recommendation it during the scale down stabilization window. (#68122, @krzysztof-jastrzebski)
- Improve CPU sample sanitization in HPA by taking metric's freshness into account. (#68068, @krzysztof-jastrzebski)
- Replace scale up forbidden window with disregarding CPU samples collected when pod was initializing. (#67252, @jbartosik)
- [e2e] verifying LimitRange update is effective before creating new pod (#68171, @dixudx)
- Port 31337 will be used by fluentd (#68051, @Szetty)
- Fix flexvolume in containarized kubelets (#65549, @gnufied)
- The check for unsupported plugins during volume resize has been moved from the admission controller to the two controllers that handle volume resize. (#66780, @kangarlou)
- kubeadm: remove redundant flags settings for kubelet (#64682, @dixudx)
- Set “priorityClassName: system-node-critical” on kube-proxy manifest by default. (#60150, @MrHohn)
- kube-proxy v1beta1 external ComponentConfig types are now available in the `k8s.io/kube-proxy` repo (#67688, @Lion-Wei)
- add missing LastTransitionTime of ContainerReady condition (#64867, @dixudx)

External Dependencies

- Default etcd server was updated to v3.2.24. (#68318)
- Rescheduler is unchanged from v1.11: v0.4.0. (#65454)
- The list of validated docker versions was updated to 1.11.1, 1.12.1, 1.13.1, 17.03, 17.06, 17.09, 18.06. (#68495)
- The default Go version was updated to 1.10.4. (68802)
- The minimum supported Go version was updated to 1.10.2 (#63412)
- CNI is unchanged from v1.10: v0.6.0 (#51250)
- CSI is unchanged from v1.11: 0.3.0 (#64719)
- The dashboard add-on unchanged from v1.10: v1.8.3. (#57326)
- Bump Heapster to v1.6.0-beta as compared to v1.5.2 in v1.11 (#67074)
- Cluster Autoscaler has been upgraded to v1.12.0 (#s8739)
- kube-dns was updated to v1.14.13. (#68900)
- Influxdb is unchanged from v1.10: v1.3.3 (#53319)

- Grafana is unchanged from v1.10: v4.4.3 (#53319)
- Kibana is at v6.3.2. (#67582)
- CAdvisor is unchanged from v1.11: v0.30.1 (#64987)
- fluentd-gcp-scaler has been updated to v0.4.0, up from 0.3.0 in v1.11. (#67691)
- fluentd in fluentd-es-image is unchanged from 1.10: v1.1.0 (#58525)
- Fluentd in fluentd-elasticsearch is unchanged from v1.11: v1.2.4 (#67434)
- fluentd-elasticsearch is unchanged from 1.10: v2.0.4 (#58525)
- The fluent-plugin-kubernetes_metadata_filter plugin in fluentd-elasticsearch has been downgraded to version 2.0.0 (#67544)
- fluentd-gcp is unchanged from 1.10: v3.0.0. (#60722)
- Ingress glbc is unchanged from 1.10: v1.0.0 (#61302)
- OIDC authentication is unchanged from 1.10: coreos/go-oidc v2 (#58544)
- Calico is unchanged from 1.10: v2.6.7 (#59130)
- hcsshim is unchanged from v1.11, at v0.11 (#64272)
- gitRepo volumes in pods no longer require git 1.8.5 or newer; older git versions are now supported. (#62394)
- Upgraded crictl on GCE to v1.11.1, up from 1.11.0 on v1.11. (#66152)
- CoreDNS has been updated to v1.2.2, up from v1.1.3 in v1.11 (#68076)
- Setup dns servers and search domains for Windows Pods in dockershim. Docker EE version >= 17.10.0 is required for propagating DNS to containers. (#63905)
- Istio addon is unchanged from v1.11, at 0.8.0. See full Istio release notes (#64537)
- cadvisor godeps is unchanged from v1.11, at v0.30.0 (#64800)
- event-exporter to version v0.2.2, compared to v0.2.0 in v1.11. (#66157)
- Rev the Azure SDK for networking to 2017-06-01 (#61955)
- Es-image has been upgraded to Elasticsearch 6.3.2 (#67484)
- metrics-server has been upgraded to v0.3.1. (#68746)
- GLBC has been updated to v1.2.3 (#66793)
- Ingress-gce has been updated to v 1.2.3 (#66793)
- ip-masq-agen has been updated to v2.1.1 (#67916)
- v1.12.0-rc.2
- v1.12.0-rc.1
- v1.12.0-beta.2
- v1.12.0-beta.1
- v1.12.0-alpha.1

v1.12.0-rc.2

Documentation & Examples

Downloads for v1.12.0-rc.2

filename	sha256 hash
kubernetes.tar.gz	`184ea437bc72d0e6a4c96b964de53181273e919a1d4785515da3406c7e982bf5`
kubernetes-src.tar.gz	`aee82938827ef05ab0ee81bac42f4f79fff126294469868d02efb3426717d71e`

Client Binaries

filename	sha256 hash

kubernetes-client-darwin-386.tar.gz	40ed3ef9bbc4fad7787dd14eae952edf06d40e1094604bc6d10209b8778c3121
kubernetes-client-darwin-amd64.tar.gz	a317fe3801ea5387ce474b9759a7e28ede8324587f79935a7a945da44c99a4b2
kubernetes-client-linux-386.tar.gz	cd61b4b71d6b739582c02b5be1d87d928507bc59f64ee72629a920cc529a0941
kubernetes-client-linux-amd64.tar.gz	306af04fc18ca2588e16fd831358df50a2cb02219687b543073836f835de8583
kubernetes-client-linux-arm.tar.gz	497584f2686339cce857cff1ebf4ed10dcd63f4684a03c242b0828fcd307be4c
kubernetes-client-linux-arm64.tar.gz	1dfbb8c299f5af15239ef39135a6c8a52ee4c234764ee0437d8f707e636c9124
kubernetes-client-linux-ppc64le.tar.gz	668d6f35c5f6adcd25584d9ef74c549db13ffca9d93b4bc8d25609a8e5837640
kubernetes-client-linux-s390x.tar.gz	8a8e205c38858bd9d161115e5e2870c6cfc9c82e189d156e7062e6fa979c3fda
kubernetes-client-windows-386.tar.gz	cdef48279c22cc8c764e43a4b9c2a86f02f21c80abbbcd48041fb1e89fb1eb67
kubernetes-client-windows-amd64.tar.gz	50621a3d2b1550c69325422c6dce78f5690574b35d3778dd3afcf698b57f0f54

Server Binaries

filename	sha256 hash
kubernetes-server-linux-amd64.tar.gz	87a8438887a2daa199508aae591b158025860b8381c64cbe9b1d0c06c4eebde9
kubernetes-server-linux-arm.tar.gz	f65be73870a0e564ef8ce1b6bb2b75ff7021a6807de84b5750e4fa78635051b6
kubernetes-server-linux-arm64.tar.gz	171f15aa8b7c365f4fee70ce025c882a921d0075bd726a99b5534cadd09273ef
kubernetes-server-linux-ppc64le.tar.gz	abc2003d58bd1aca517415c582ed1e8bb1ed596bf04197f4fc7c0c51865a9f86
kubernetes-server-linux-s390x.tar.gz	e2ce834abb4d45d91fd7a8d774e47f0f8092eb4edcf556605c2ef6e2b190b8b1

Node Binaries

filename	sha256 hash
kubernetes-node-linux-amd64.tar.gz	6016c3a1e14c42dcc88caed6497de1b2c56a02bb52d836b19e2ff52098302dda
kubernetes-node-linux-arm.tar.gz	e712e38c8037159ea074ad93c2f2905cf279f3f119e5fdbf9b97391037a8813f
kubernetes-node-linux-arm64.tar.gz	7f4095f12d8ad9438919fa447360113799f88bb9435369b9307a41dd9c7692a6
kubernetes-node-linux-ppc64le.tar.gz	4aeb5dbb0c68e54570542eb5a1d7506d73c81b57eba3c2080ee73bb53dbc3be0
kubernetes-node-linux-s390x.tar.gz	a1605995981672082 86db6dc73b415952836218d967fa964fc432b213f1b9908
kubernetes-node-windows-	174bedf62b7959d4cb1b1595666f607cd6377c7a2e2208fef5bd554603db5db3

amd64.tar.gz	

Changelog since v1.12.0-rc.1

Other notable changes

- Update to use manifest list for etcd image (#68896, @ixdy)
- Fix Azure nodes power state for InstanceShutdownByProviderID() (#68921, @feiskyer)
- Bump kube-dns to 1.14.13 (#68900, @MrHohn)
  - Update Alpine base image to 3.8.1.
  - Build multi-arch images correctly.
- kubelet: fix grpc timeout in the CRI client (#67793, @fisherxu)
- Update to golang 1.10.4 (#68802, @ixdy)
- kubeadm now uses fat manifests for the kube-dns images (#68830, @rosti)
- Update Cluster Autoscaler version to 1.12.0. (#68739, @losipiuk)
  - See https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.12.0 for CA release notes.
- kube-proxy restores the *filter table when running in ipvs mode. (#68786, @alexjx)
- New kubeDNS image fixes an issue where SRV records were incorrectly being compressed. Added manifest file for multiple arch images. (#68430, @prameshj)
- Drain should delete terminal pods. (#68767, @ravisantoshgudimetla)

v1.12.0-rc.1

Documentation & Examples

Downloads for v1.12.0-rc.1

filename	sha256 hash
kubernetes.tar.gz	ac65cf9571c3a03105f373db23c8d7f4d01fe1c9ee09b06615bb02d0b81d572c
kubernetes-src.tar.gz	28518e1d9c7fe5c54aa3b57235ac8d1a7dae02aec04177c38ca157fc2d16edb6

Client Binaries

filename	sha256 hash
kubernetes-client-darwin-386.tar.gz	7b6f6f264464d40b7975baecdd796d4f75c5a305999b4ae1f4513646184cac7c
kubernetes-client-darwin-amd64.tar.gz	5feabe3e616125a36ce4c8021d6bdccdec0f3d82f151b80af7cac1453255b4d5
kubernetes-client-linux-386.tar.gz	40524a1a09dd24081b3494593a02a461227727f8706077542f2b8603e1cf7e06
kubernetes-client-linux-amd64.tar.gz	ac2c9757d7df761bdf8ffc259fff07448c300dd110c7dbe2ae3830197eb023e9
kubernetes-client-linux-arm.tar.gz	02f27ae16e8ebb12b3cb66391fe85f64de08a99450d726e9defd2c5bcd590955
kubernetes-client-linux-arm64.tar.gz	1286af2cad3f8e2ee8e2dc18a738935779631b58e7ef3da8794bbeadca2f332e
kubernetes-client-linux-	

ppc64le.tar.gz	9c04419b159fb0fe501d6e0c8122d6a80b5d6961070ebc5e759f4327a1156cf4
kubernetes-client-linux-s390x.tar.gz	104d5c695826971c64cb0cec26cf791d609d3e831edb33574e9af2c4b191f049
kubernetes-client-windows-386.tar.gz	0096f8126eb04eafa9decd258f6d09977d24eee91b83781347a34ebb7d2064aa
kubernetes-client-windows-amd64.tar.gz	a641a1a421795279a6213163d7becab9dc6014362e6566f13d660ef1638dc286

Server Binaries

filename	sha256 hash
kubernetes-server-linux-amd64.tar.gz	202958d3cfb774fd065ad1ec2477dc9c92ce7f0ff355807c9a2a3a61e8dad927
kubernetes-server-linux-arm.tar.gz	474de8f6a58d51eb01f6cc73b41897351528a839f818d5c4f828a484f8bc988b
kubernetes-server-linux-arm64.tar.gz	dbd5affd244815bf45ac0c7a56265800864db623a6a37e7ce9ebe5e5896453f8
kubernetes-server-linux-ppc64le.tar.gz	a62fefa8ad7b3fbfeb7702dac7d4d6f37823b6c3e4edae3356bf0781b48e42e1
kubernetes-server-linux-s390x.tar.gz	0f77690f87503c8ee7ccb473c9d2b9d26420292defd82249509cf50d8bb1a16c

Node Binaries

filename	sha256 hash
kubernetes-node-linux-amd64.tar.gz	2191845147d5aab08f14312867f86078b513b6aff8685bb8ce84a06b78ae9914
kubernetes-node-linux-arm.tar.gz	54de98d7d2a71b78bc7a45e70a2005144d210401663f5a9daadedd05f89291f0
kubernetes-node-linux-arm64.tar.gz	a765514e0c4865bb20ceb476af83b9d9356c9b565cfe12615ecf7ad3d5a6b4f7
kubernetes-node-linux-ppc64le.tar.gz	b7ae7d159602d0b933614071f11216ede4df3fc2b28a30d0018e06b3bb22cf6e
kubernetes-node-linux-s390x.tar.gz	7d4f502eda6aa70b7a18420344abfaec740d74a1edffcb9869e4305c22bba260
kubernetes-node-windows-amd64.tar.gz	ed5516b1f66a39592a101bec135022b3905a66ae526b8ed3e2e9dff5ed68eda0

Changelog since v1.12.0-beta.2

Action Required

- Service events are now added in azure-cloud-provider for easily identify the underground errors of Azure API. (#68212, @feiskyer)
  - Action required: The following clusterrole and clusterrolebinding should be applied:

```
    kind: List
    apiVersion: v1
```

```
items:
- apiVersion: rbac.authorization.k8s.io/v1
  kind: ClusterRole
  metadata:
    labels:
      kubernetes.io/cluster-service: "true"
    name: system:azure-cloud-provider
  rules:
  - apiGroups: [""]
    resources: ["events"]
    verbs:
    - create
    - patch
    - update
- apiVersion: rbac.authorization.k8s.io/v1
  kind: ClusterRoleBinding
  metadata:
    labels:
      kubernetes.io/cluster-service: "true"
    name: system:azure-cloud-provider
  roleRef:
    apiGroup: rbac.authorization.k8s.io
    kind: ClusterRole
    name: system:azure-cloud-provider
  subjects:
  - kind: ServiceAccount
    name: azure-cloud-provider
    namespace: kube-system
```

- If the clusterrole with same has already been provisioned (e.g. for accessing azurefile secrets), then the above yaml should be merged togather, e.g.

```
kind: List
apiVersion: v1
items:
- apiVersion: rbac.authorization.k8s.io/v1
  kind: ClusterRole
  metadata:
    labels:
      kubernetes.io/cluster-service: "true"
    name: system:azure-cloud-provider
  rules:
  - apiGroups: [""]
    resources: ["events"]
    verbs:
    - create
    - patch
    - update
  - apiGroups: [""]
    resources: ["secrets"]
    verbs:
    - get
```

```
      - create
  - apiVersion: rbac.authorization.k8s.io/v1
    kind: ClusterRoleBinding
    metadata:
      labels:
        kubernetes.io/cluster-service: "true"
      name: system:azure-cloud-provider
    roleRef:
      apiGroup: rbac.authorization.k8s.io
      kind: ClusterRole
      name: system:azure-cloud-provider
    subjects:
    - kind: ServiceAccount
      name: azure-cloud-provider
      namespace: kube-system
    - kind: ServiceAccount
      name: persistent-volume-binder
      namespace: kube-system
```

Other notable changes

- Update metrics-server to v0.3.1 (#68746, @DirectXMan12)
- Upgrade kubeadm's version of docker support (#68495, @yuansisi)
- fix a bug that overwhelming number of prometheus metrics are generated because $NAMESPACE is not replaced by string "{namespace}" (#68530, @wenjiaswe)
- The feature gates `ReadOnlyAPIDataVolumes` and `ServiceProxyAllowExternalIPs`, deprecated since 1.10, have been removed and any references must be removed from command-line invocations. (#67951, @liggitt)
- Verify invalid secret/configmap/projected volumes before calling setup (#68691, @gnufied)
- Fix bug that caused `kubectl` commands to sometimes fail to refresh access token when running against GKE clusters. (#66314, @jlowdermilk)
- Use KubeDNS by default in GCE setups, as CoreDNS has significantly higher memory usage in large clusters. (#68629, @shyamjvs)
- Fix PodAntiAffinity issues in case of multiple affinityTerms. (#68173, @Huang-Wei)
- Make APIGroup field in TypedLocalObjectReference optional. (#68419, @xing-yang)
- Fix potential panic when getting azure load balancer status (#68609, @feiskyer)
- Fix kubelet panics when RuntimeClass is enabled. (#68521, @yujuhong)
- cAdvisor: Fix NVML initialization race condition (#68431, @dashpole)
  - cAdvisor: Fix brtfs filesystem discovery
  - cAdvisor: Fix race condition with AllDockerContainers
  - cAdvisor: Don't watch .mount cgroups
  - cAdvisor: Reduce lock contention during list containers
- Promote ScheduleDaemonSetPods by default scheduler to beta (#67899, @ravisantoshgudimetla)

v1.12.0-beta.2

Documentation & Examples

Downloads for v1.12.0-beta.2

filename	sha256 hash
kubernetes.tar.gz	7163d18b9c1bd98ce804b17469ed67b399deb7b574dd12a86609fc647c5c773b
kubernetes-src.tar.gz	6225b71b2dec0f29afb713e64d2b6b82bd0e122274c31310c0de19ef023cb1d0

Client Binaries

filename	sha256 hash
kubernetes-client-darwin-386.tar.gz	f2ec9799e47c28fce336bc90a6e9b4e47def7081fd73b8e2164940f0a6c824c7
kubernetes-client-darwin-amd64.tar.gz	0e8cfcbe5ec862423ced97da1d9740d4cc4904a0d5cd11a60616aee596bc7622
kubernetes-client-linux-386.tar.gz	1cbd6e8dd892cfc2555d37e733b66aaf85df9950466c7295875d312ac254ddfc
kubernetes-client-linux-amd64.tar.gz	47337b58a26a4953e5c061d28e3ec89b3d4354bce40f9b51fbe269598caeff03
kubernetes-client-linux-arm.tar.gz	eaaed82f428fb7ddbb10b4e39a2f287817c33ae24ff16008159f437acc653d4a
kubernetes-client-linux-arm64.tar.gz	3249d1c7d5d5500793546eb144fe537d1984a01c7a79c1382eb2e26a78e532cd
kubernetes-client-linux-ppc64le.tar.gz	67afd34f2199deff901b0872a177dc448ba700dc4ced9ede6f3187a0eed2c6fb
kubernetes-client-linux-s390x.tar.gz	e8faa6e45c6e2aeb67ac65737e09be87c190e3c89782ec87a9a205d4f1af9246
kubernetes-client-windows-386.tar.gz	2395051c8cbd0a995b5f3689c0f8c0447bcc1c46440d8cdeffd7c7fccf8e8ae1
kubernetes-client-windows-amd64.tar.gz	c6a38ee6eda20656b391ecfcc1f24505eb8a3a5a3200d4bddede318291773619

Server Binaries

filename	sha256 hash
kubernetes-server-linux-amd64.tar.gz	795c713a91118218f5952e1bd4cf0933f36476aa3d9d60a9ee43c9bae8400fd3
kubernetes-server-linux-arm.tar.gz	1798d48a37b8f06878e0ecb8d9b67d0fb5c8ee721608412add57725eb5ce5f1e
kubernetes-server-linux-arm64.tar.gz	da2459b5e811daaa2fc04a072773e81dc220400f3aeb6e29bb9594c306c7b266
kubernetes-server-linux-ppc64le.tar.gz	7fd1c2ba0c2c9da5db54f8d0aed28261f03e9953ce01fa367e4ce3d84bf01b4f
kubernetes-server-linux-s390x.tar.gz	c9fafb009d7e5da74f588aaa935244c452de52b9488863b90e8b477b1bb16e52

Node Binaries

filename	sha256 hash
kubernetes-node-linux-amd64.tar.gz	ab901137b499829b20b868492d04c1f69d738620b96eb349c642d6d773c44448

kubernetes-node-linux-arm.tar.gz	`116dd82721f200f3f37df0e47aebb611fdd7856f94d4c2ebb1d51db21b793a9c`
kubernetes-node-linux-arm64.tar.gz	`56d8316eb95f7f54c154625063617b86ffb8e2cc80b8225cce4f5c91d2d3a64f`
kubernetes-node-linux-ppc64le.tar.gz	`66535b16ad588ba3bfcb40728a0497c6821360ab7be9c3ced2072bfa107e5c46`
kubernetes-node-linux-s390x.tar.gz	`688e09becc9327e50c68b33161eac63a8ba018c02fb298cbd0de82d6ed5dba90`
kubernetes-node-windows-amd64.tar.gz	`b72582f67d19c06f605ca9b02c08b7227796c15c639e3c09b06a8b667c4569fe`

Changelog since v1.12.0-beta.1

Action Required

- Action required: The --storage-versions flag of kube-apiserver is deprecated. Please omit this flag to ensure the default storage versions are used. Otherwise the cluster is not safe to upgrade to a version newer than 1.12. This flag will be removed in 1.13. (#68080, @caesarxuchao)

Other notable changes

- kubeadm: add mandatory "--config" flag to "kubeadm alpha phase preflight" (#68446, @neolit123)
- Apply user configurations for local etcd (#68334, @SataQiu)
- kubeadm: added phase command "alpha phase kubelet config annotate-cri" (#68449, @fabriziopandini)
- If `TaintNodesByCondition` is enabled, add `node.kubernetes.io/unschedulable` and `node.kubernetes.io/network-unavailable` automatically to DaemonSet pods. (#64954, @k82cn)
- Deprecate cloudstack and ovirt controllers (#68199, @dims)
- add missing LastTransitionTime of ContainerReady condition (#64867, @dixudx)
- kube-controller-manager: use informer cache instead of active pod gets in HPA controller (#68241, @krzysztof-jastrzebski)
- Support NodeShutdown taint for azure (#68033, @yastij)
- Registers volume topology information reported by a node-level Container Storage Interface (CSI) driver. This enables Kubernetes support of CSI topology mechanisms. (#67684, @verult)
- Update default etcd server to 3.2.24 for kubernetes 1.12 (#68318, @timothysc)
- External CAs can now be used for kubeadm with only a certificate, as long as all required certificates already exist. (#68296, @liztio)
- Bump addon-manager to v8.7 (#68299, @MrHohn)
  - Support extra `--prune-whitelist` resources in kube-addon-manager.
  - Update kubectl to v1.10.7.
- Let service controller retry creating load balancer when persistUpdate failed due to conflict. (#68087, @grayluck)
- Kubelet now only sync iptables on Linux. (#67690, @feiskyer)
- CSI NodePublish call can optionally contain information about the pod that requested the CSI volume. (#67945, @jsafrane)
- [e2e] verifying LimitRange update is effective before creating new pod (#68171, @dixudx)
- cluster/gce: generate consistent key sizes in config-default.sh using /dev/urandom instead of /dev/random (#67139, @yogi-sagar)
- Add support for volume attach limits for CSI volumes (#67731, @gnufied)
- CSI volume plugin does not need external attacher for non-attachable CSI volumes. (#67955, @jsafrane)
- KubeletPluginsWatcher feature graduates to beta. (#68200, @RenaudWasTaken)
- Update etcd client to 3.2.24 for latest release (#68147, @timothysc)

- [fluentd-gcp-scaler addon] Bump fluentd-gcp-scaler to 0.4 to pick up security fixes. (#67691, @loburm)
    - [prometheus-to-sd addon] Bump prometheus-to-sd to 0.3.1 to pick up security fixes, bug fixes and new features.
    - [event-exporter addon] Bump event-exporter to 0.2.3 to pick up security fixes.
- Fixes issue where pod scheduling may fail when using local PVs and pod affinity and anti-affinity without the default StatefulSet OrderedReady pod management policy (#67556, @msau42)
- Kubelet only applies default hard evictions of nodefs.inodesFree on Linux (#67709, @feiskyer)
- Add kubelet stats for windows system container "pods" (#66427, @feiskyer)
- Add a TTL machenism to clean up Jobs after they finish. (#66840, @janetkuo)

v1.12.0-beta.1

Documentation & Examples

Downloads for v1.12.0-beta.1

filename	sha256 hash
kubernetes.tar.gz	caa332b14a6ea9d24710e3b015a91b62c04cab14bed14c49077e08bd82b8f4c1
kubernetes-src.tar.gz	821bdea3a52a348306fa8226bcfffa67b375cf1dd80e4be343ce0b38dd20a9a0

Client Binaries

filename	sha256 hash
kubernetes-client-darwin-386.tar.gz	58323c0a81afe53dd0dda1c6eb513caa4c82514fb6c7f0a327242e573ce80490
kubernetes-client-darwin-amd64.tar.gz	28e9344ede16890ea7848c261e461ded89c3bb2dd5b08446da04b071b48f0b02
kubernetes-client-linux-386.tar.gz	a9eece5e0994d2ad5e07152d88787a8b5e9efcdf78983a5bafe3699e5274a9da
kubernetes-client-linux-amd64.tar.gz	9a67750cc4243335f0c2eb89db1c4b54b0a8af08c59e2041636d0a3e946546bf
kubernetes-client-linux-arm.tar.gz	bbd2644f843917a3de517a53c90b327502b577fe533a9ad3da4fe6bc437c4a02
kubernetes-client-linux-arm64.tar.gz	630946f49ef18dd43c004d99dccd9ae76390281f54740d7335c042f6f006324b
kubernetes-client-linux-ppc64le.tar.gz	1d4e5cd83faf4cae8e16667576492fcd48a72f69e8fd89d599a8b555a41e90d6
kubernetes-client-linux-s390x.tar.gz	9cefdcf21a62075b5238fda8ef2db08f81b0541ebce0e67353af1dded9e53483
kubernetes-client-windows-386.tar.gz	8b0085606ff38bded362bbe4826b5c8ee5199a33d5cbbc1b9b58f1336648ad5b
kubernetes-client-windows-amd64.tar.gz	f44a3ec55dc7d926e681c33b5f7830c6d1cb165e24e349e426c1089b2d05a1df

Server Binaries

filename	sha256 hash

kubernetes-server-linux-amd64.tar.gz	1bf7364aa168fc251768bc850d66fef1d93f324f0ec85f6dce74080627599b70
kubernetes-server-linux-arm.tar.gz	dadc94fc0564cfa98add5287763bbe9c33bf8ba3eebad95fb2258c33fe8c5df3
kubernetes-server-linux-arm64.tar.gz	2e6c8a7810705594f191b33476bf4c8fca8cebb364f0855dfea577b01fca7b7e
kubernetes-server-linux-ppc64le.tar.gz	ced4a0a4e03639378eff0d3b8bfb832f5fb96be8df3e0befbdbd71373a323130
kubernetes-server-linux-s390x.tar.gz	7e1a3fac2115c15b5baa0db04c7f319fbaaca92aa4c4588ecf62fb19812465a8

Node Binaries

filename	sha256 hash
kubernetes-node-linux-amd64.tar.gz	81d2e2f4cd3254dd345c1e921b12bff62eb96e7551336c44fb0da5407bf5fe5f
kubernetes-node-linux-arm.tar.gz	b14734a20190aca2b2af9cee59549d285be4f0c38faf89c5308c94534110edc1
kubernetes-node-linux-arm64.tar.gz	ad0a81ecf6ef8346b7aa98a8d02a4f3853d0a5439d149a14b1ac2307b763b2ad
kubernetes-node-linux-ppc64le.tar.gz	8e6d72837fe19afd055786c8731bd555fe082e107195c956c6985e56a03d504f
kubernetes-node-linux-s390x.tar.gz	0fc7d55fb2750b29c0bbc36da050c8bf14508b1aa40e38e3b7f6cf311b464827
kubernetes-node-windows-amd64.tar.gz	09bf133156b9bc474d272bf16e765b143439959a1f007283c477e7999f2b4d6a

Changelog since v1.12.0-alpha.1

Action Required

- Move volume dynamic provisioning scheduling to beta (ACTION REQUIRED: The DynamicProvisioningScheduling alpha feature gate has been removed. The VolumeScheduling beta feature gate is still required for this feature) (#67432, @lichuqiang)

Other notable changes

- Not split nodes when searching for nodes but doing it all at once. (#67555, @wgliang)
- Deprecate kubectl run generators, except for run-pod/v1 (#68132, @soltysh)
- Using the Horizontal Pod Autoscaler with metrics from Heapster is now deprecated. (#68089, @DirectXMan12)
- Support both directory and block device for local volume plugin FileSystem VolumeMode (#63011, @NickrenREN)
- Add CSI volume attributes for kubectl describe pv. (#65074, @wgliang)
- `kubectl rollout status` now works for unlimited timeouts. (#67817, @tnozicka)
- Fix panic when processing Azure HTTP response. (#68210, @feiskyer)
- add mixed protocol support for azure load balancer (#67986, @andyzhangx)
- Replace scale down forbidden window with scale down stabilization window. Rather than waiting a fixed period of time between scale downs HPA now scales down to the highest recommendation it during the scale down stabilization window. (#68122, @krzysztof-jastrzebski)
- Adding validation to kube-scheduler at the API level (#66799, @noqcks)

- Improve performance of Pod affinity/anti-affinity in the scheduler (#67788, @ahmad-diaa)
- kubeadm: fix air-gapped support and also allow some kubeadm commands to work without an available networking interface (#67397, @neolit123)
- Increase Horizontal Pod Autoscaler default update interval (30s -> 15s). It will improve HPA reaction time for metric changes. (#68021, @krzysztof-jastrzebski)
- Increase scrape frequency of metrics-server to 30s (#68127, @serathius)
- Add new `--server-dry-run` flag to `kubectl apply` so that the request will be sent to the server with the dry-run flag (alpha), which means that changes won't be persisted. (#68069, @apelisse)
- kubelet v1beta1 external ComponentConfig types are now available in the `k8s.io/kubelet` repo (#67263, @luxas)
- Adds a kubelet parameter and config option to change CFS quota period from the default 100ms to some other value between 1µs and 1s. This was done to improve response latencies for workloads running in clusters with guaranteed and burstable QoS classes. (#63437, @szuecs)
- Enable secure serving on port 10258 to cloud-controller-manager (configurable via `--secure-port`). Delegated authentication and authorization have to be configured like for aggregated API servers. (#67069, @sttts)
- Support extra `--prune-whitelist` resources in kube-addon-manager. (#67743, @Random-Liu)
- Upon receiving a LIST request with expired continue token, the apiserver now returns a continue token together with the 410 "the from parameter is too old " error. If the client does not care about getting a list from a consistent snapshot, the client can use this token to continue listing from the next key, but the returned chunk will be from the latest snapshot. (#67284, @caesarxuchao)
- Role, ClusterRole and their bindings for cloud-provider is put under system namespace. Their addonmanager mode switches to EnsureExists. (#67224, @grayluck)
- Mount propagation has promoted to GA. The `MountPropagation` feature gate is deprecated and will be removed in 1.13. (#67255, @bertinatto)
- Introduce CSI Cluster Registration mechanism to ease CSI plugin discovery and allow CSI drivers to customize Kubernetes' interaction with them. (#67803, @saad-ali)
- Adds the commands `kubeadm alpha phases renew <cert-name>` (#67910, @liztio)
- ProcMount added to SecurityContext and AllowedProcMounts added to PodSecurityPolicy to allow paths in the container's /proc to not be masked. (#64283, @jessfraz)
- support cross resource group for azure file (#68117, @andyzhangx)
- Port 31337 will be used by fluentd (#68051, @Szetty)
- Improve CPU sample sanitization in HPA by taking metric's freshness into account. (#68068, @krzysztof-jastrzebski)
- CoreDNS is now v1.2.2 for Kubernetes 1.12 (#68076, @rajansandeep)
- Enable secure serving on port 10257 to kube-controller-manager (configurable via `--secure-port`). Delegated authentication and authorization have to be configured like for aggregated API servers. (#64149, @sttts)
- Update metrics-server to v0.3.0. (#68077, @DirectXMan12)
- TokenRequest and TokenRequestProjection are now beta features. To enable these feature, the API server needs to be started with the following flags: (#67349, @mikedanese)
  - `--service-account-issuer`
  - `--service-account-signing-key-file`
  - `--service-account-api-audiences`
- Don't let aggregated apiservers fail to launch if the external-apiserver-authentication configmap is not found in the cluster. (#67836, @sttts)
- Promote AdvancedAuditing to GA, replacing the previous (legacy) audit logging mechanisms. (#65862, @loburm)

- Azure cloud provider now supports unmanaged nodes (such as on-prem) that are labeled with `kubernetes.azure.com/managed=false` and `alpha.service-controller.kubernetes.io/exclude-balancer=true` (#67984, @feiskyer)
- `kubectl get apiservice` now shows the target service and whether the service is available (#67747, @smarterclayton)
- Openstack supports now node shutdown taint. Taint is added when instance is shutdown in openstack. (#67982, @zetaab)
- Return apiserver panics as 500 errors instead terminating the apiserver process. (#68001, @sttts)
- Fix VMWare VM freezing bug by reverting #51066 (#67825, @nikopen)
- Make CoreDNS be the default DNS server in kube-up (instead of kube-dns formerly). (#67569, @fturib)
  - It is still possible to deploy kube-dns by setting CLUSTER_DNS_CORE_DNS=false.
- Added support to restore a volume from a volume snapshot data source. (#67087, @xing-yang)
- fixes the errors/warnings in fluentd configuration (#67947, @saravanan30erd)
- Stop counting soft-deleted pods for scaling purposes in HPA controller to avoid soft-deleted pods incorrectly affecting scale up replica count calculation. (#67067, @moonek)
- delegated authn/z: optionally opt-out of mandatory authn/authz kubeconfig (#67545, @sttts)
- kubeadm: Control plane images (etcd, kube-apiserver, kube-proxy, etc.) don't use arch suffixes. Arch suffixes are kept for kube-dns only. (#66960, @rosti)
- Adds sample-cli-plugin staging repository (#67938, @soltysh)
- adjusted http/2 buffer sizes for apiservers to prevent starvation issues between concurrent streams (#67902, @liggitt)
- SCTP is now supported as additional protocol (alpha) alongside TCP and UDP in Pod, Service, Endpoint, and NetworkPolicy. (#64973, @janosi)
- Always create configmaps/extensions-apiserver-authentication from kube-apiserver. (#67694, @sttts)
- kube-proxy v1beta1 external ComponentConfig types are now available in the `k8s.io/kube-proxy` repo (#67688, @Lion-Wei)
- Apply unreachable taint to a node when it lost network connection. (#67734, @Huang-Wei)
- Allow ImageReview backend to return annotations to be added to the created pod. (#64597, @wteiken)
- Bump ip-masq-agent to v2.1.1 (#67916, @MrHohn)
  - Update debian-iptables image for CVEs.
  - Change chain name to IP-MASQ to be compatible with the pre-injected masquerade rules.
- AllowedTopologies field inside StorageClass is now validated against set and map semantics. Specifically, there cannot be duplicate TopologySelectorTerms, MatchLabelExpressions keys, and TopologySelectorLabelRequirement Values. (#66843, @verult)
- Introduces autoscaling/v2beta2 and custom_metrics/v1beta2, which implement metric selectors for Object and Pods metrics, as well as allowing AverageValue targets on Objects, similar to External metrics. (#64097, @damemi)
- The cloudstack cloud provider now reports a `Hostname` address type for nodes based on the `local-hostname` metadata key. (#67719, @liggitt)
- kubeadm: --cri-socket now defaults to tcp://localhost:2375 when running on Windows (#67447, @benmoss)
- kubeadm: The kubeadm configuration now support definition of more than one control plane instances with their own APIEndpoint. The APIEndpoint for the "bootstrap" control plane instance should be defined using `InitConfiguration.APIEndpoint`, while the APIEndpoints for additional control plane instances should be added using `JoinConfiguration.APIEndpoint`. (#67832, @fabriziopandini)
- Enable dynamic azure disk volume limits (#67772, @andyzhangx)
- kubelet: Users can now enable the alpha NodeLease feature gate to have the Kubelet create and periodically renew a Lease in the kube-node-lease namespace. The lease duration defaults to 40s, and can be configured via the kubelet.config.k8s.io/v1beta1.KubeletConfiguration's NodeLeaseDurationSeconds field. (#66257, @mtaufen)

- latent controller caches no longer cause repeating deletion messages for deleted pods (#67826, @deads2k)
- API paging is now enabled for custom resource definitions, custom resources and APIService objects (#67861, @liggitt)
- kubeadm: ControlPlaneEndpoint was moved from the API config struct to ClusterConfiguration (#67830, @fabriziopandini)
- kubeadm - feature-gates HighAvailability, SelfHosting, CertsInSecrets are now deprecated and can't be used anymore for new clusters. Update of cluster using above feature-gates flag is not supported (#67786, @fabriziopandini)
- Replace scale up forbidden window with disregarding CPU samples collected when pod was initializing. (#67252, @jbartosik)
- Moving KubeSchedulerConfiguration from ComponentConfig API types to staging repos (#66916, @dixudx)
- Improved error message when checking the rollout status of StatefulSet with OnDelete strategy type (#66983, @mortent)
- RuntimeClass is a new API resource for defining different classes of runtimes that may be used to run containers in the cluster. Pods can select a RunitmeClass to use via the RuntimeClassName field. This feature is in alpha, and the RuntimeClass feature gate must be enabled in order to use it. (#67737, @tallclair)
- Remove rescheduler since scheduling DS pods by default scheduler is moving to beta. (#67687, @Lion-Wei)
- Turn on PodReadinessGate by default (#67406, @freehan)
- Speed up kubelet start time by executing an immediate runtime and node status update when the Kubelet sees that it has a CIDR. (#67031, @krzysztof-jastrzebski)
- The OpenStack cloud provider now reports a `Hostname` address type for nodes (#67748, @FengyunPan2)
- The aws cloud provider now reports a `Hostname` address type for nodes based on the `local-hostname` metadata key. (#67715, @liggitt)
- Azure cloud provider now supports cross resource group nodes that are labeled with `kubernetes.azure.com/resource-group=<rg-name>` and `alpha.service-controller.kubernetes.io/exclude-balancer=true` (#67604, @feiskyer)
- Reduce API calls for Azure instance metadata. (#67478, @feiskyer)
- `kubectl create secret tls` can now read certificate and key files from process substitution arguments (#67713, @liggitt)
- change default value of kind for azure disk (#67483, @andyzhangx)
- To address the possibility dry-run requests overwhelming admission webhooks that rely on side effects and a reconciliation mechanism, a new field is being added to admissionregistration.k8s.io/v1beta1.ValidatingWebhookConfiguration and admissionregistration.k8s.io/v1beta1.MutatingWebhookConfiguration so that webhooks can explicitly register as having dry-run support. If a dry-run request is made on a resource that triggers a non dry-run supporting webhook, the request will be completely rejected, with "400: Bad Request". Additionally, a new field is being added to the admission.k8s.io/v1beta1.AdmissionReview API object, exposing to webhooks whether or not the request being reviewed is a dry-run. (#66936, @jennybuckley)
- Kubeadm ha upgrade (#66973, @fabriziopandini)
- kubeadm: InitConfiguration now consists of two structs: InitConfiguration and ClusterConfiguration (#67441, @rosti)
- Updated Cluster Autoscaler version to 1.3.2-beta.2. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.3.2-beta.2 (#67697, @aleksandra-malinowska)
- cpumanager: rollback state if updateContainerCPUSet failed (#67430, @choury)
- [CRI] Adds a "runtime_handler" field to RunPodSandboxRequest, for selecting the runtime configuration to run the sandbox with (alpha feature). (#67518, @tallclair)
- Create cli-runtime staging repository (#67658, @soltysh)
- Headless Services with no ports defined will now create Endpoints correctly, and appear in DNS. (#67622, @thockin)

- Kubernetes juju charms will now use CSI for ceph. (#66523, @hyperbolic2346)
- kubeadm: Fix panic when node annotation is nil (#67648, @xlgao-zju)
- Prevent `resourceVersion` updates for custom resources on no-op writes. (#67562, @nikhita)
- Fail container start if its requested device plugin resource hasn't registered after Kubelet restart. (#67145, @jiayingz)
- Use sync.map to scale ecache better (#66862, @resouer)
- DaemonSet: Fix bug- daemonset didn't create pod after node have enough resource (#67337, @linyouchong)
- updates kibana to 6.3.2 (#67582, @monotek)
- fixes json logging in fluentd-elasticsearch image by downgrading fluent-plugin-kubernetes_metadata_filter plugin to version 2.0.0 (#67544, @monotek)
- add --dns-loop-detect option to dnsmasq run by kube-dns (#67302, @dixudx)
- Switched certificate data replacement from "REDACTED" to "DATA+OMITTED" (#66023, @ibrasho)
- improve performance of anti-affinity predicate of default scheduler. (#66948, @mohamed-mehany)
- Fixed a bug that was blocking extensible error handling when serializing API responses error out. Previously, serialization failures always resulted in the status code of the original response being returned. Now, the following behavior occurs: (#67041, @tristanburgess)
  - If the serialization type is application/vnd.kubernetes.protobuf, and protobuf marshaling is not implemented for the requested API resource type, a '406 Not Acceptable is returned'.
  - If the serialization type is 'application/json':
  - If serialization fails, and the original status code was an failure (e.g. 4xx or 5xx), the original status code will be returned.
  - If serialization fails, and the original status code was not a failure (e.g. 2xx), the status code of the serialization failure will be returned. By default, this is '500 Internal Server Error', because JSON serialization is our default, and not supposed to be implemented on a type-by-type basis.
- Add a feature to the scheduler to score fewer than all nodes in every scheduling cycle. This can improve performance of the scheduler in large clusters. (#66733, @bsalamat)
- kube-controller-manager can now start the quota controller when discovery results can only be partially determined. (#67433, @deads2k)
- The plugin mechanism functionality now closely follows the git plugin design (#66876, @juanvallejo)
- GCE: decrease cpu requests on master node, to allow more components to fit on one core machine. (#67504, @loburm)
- PVC may not be synced to controller local cache in time if PV is bound by external PV binder (e.g. kube-scheduler), double check if PVC is not found to prevent reclaiming PV wrongly. (#67062, @cofyc)
- add more storage account sku support for azure disk (#67528, @andyzhangx)
- updates es-image to elasticsearch 6.3.2 (#67484, @monotek)
- Bump GLBC version to 1.2.3 (#66793, @freehan)
- kube-apiserver: fixes error creating system priority classes when starting multiple apiservers simultaneously (#67372, @tanshanshan)
- kubectl patch now respects --local (#67399, @deads2k)
- Defaults for file audit logging backend in batch mode changed: (#67223, @tallclair)
  - Logs are written 1 at a time (no batching)
  - Only a single writer process (lock contention)
- Forget rate limit when CRD establish controller successfully updated CRD condition (#67370, @yue9944882)
- updates fluentd in fluentd-elasticsearch to version 1.2.4 (#67434, @monotek)
  - also updates activesupport, fluent-plugin-elasticsearch & oj gems
- The dockershim now sets the "bandwidth" and "ipRanges" CNI capabilities (dynamic parameters). Plugin authors and administrators can now take advantage of this by updating their CNI configuration file. For more information, see the CNI docs (#64445, @squeed)

- Expose `/debug/flags/v` to allow kubelet dynamically set glog logging level. If want to change glog level to 3, you only have to send a PUT request like `curl -X PUT http://127.0.0.1:8080/debug/flags/v -d "3"`. (#64601, @hzxuzhonghu)
- Fix an issue that pods using hostNetwork keep increasing. (#67456, @Huang-Wei)
- DaemonSet controller is now using backoff algorithm to avoid hot loops fighting with kubelet on pod recreation when a particular DaemonSet is misconfigured. (#65309, @tnozicka)
- Add node affinity for Azure unzoned managed disks (#67229, @feiskyer)
- Attacher/Detacher refactor for local storage (#66884, @NickrenREN)
- Update debian-iptables and hyperkube-base images to include CVE fixes. (#67365, @ixdy)
- Fix an issue where filesystems are not unmounted when a backend is not reachable and returns EIO. (#67097, @chakri-nelluri)
- Update Cluster Autoscaler version to 1.3.2-beta.1. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.3.2-beta.1 (#67396, @aleksandra-malinowska)
- Remove unused binary and container image for kube-aggregator. The functionality is already integrated into the kube-apiserver. (#67157, @dims)
- Avoid creating new controller revisions for statefulsets when cache is stale (#67039, @mortent)
- Revert #63905: Setup dns servers and search domains for Windows Pods. DNS for Windows containers will be set by CNI plugins. (#66587, @feiskyer)
- attachdetach controller attaches volumes immediately when Pod's PVCs are bound (#66863, @cofyc)
- The check for unsupported plugins during volume resize has been moved from the admission controller to the two controllers that handle volume resize. (#66780, @kangarlou)
- Fix kubelet to not leak goroutines/intofiy watchers on an inactive connection if it's closed (#67285, @yujuhong)
- fix azure disk create failure due to sdk upgrade (#67236, @andyzhangx)
- Kubeadm join --control-plane main workflow (#66873, @fabriziopandini)
- Dynamic provisions that create iSCSI PVs can ensure that multipath is used by specifying 2 or more target portals in the PV, which will cause kubelet to wait up to 10 seconds for the multipath device. PVs with just one portal continue to work as before, with kubelet not waiting for the multipath device and just using the first disk it finds. (#67140, @bswartz)
- kubectl: recreating resources for immutable fields when force is applied (#66602, @dixudx)
- Remove deprecated --interactive flag from kubectl logs. (#65420, @jsoref)
- kubeadm uses audit policy v1 instead of v1beta1 (#67176, @charrywanganthony)
- kubeadm: make sure pre-pulled kube-proxy image and the one specified in its daemon set manifest are the same (#67131, @rosti)
- Graduate Resource Quota ScopeSelectors to beta, and enable it by default. (#67077, @vikaschoudhary16)
- Decrease the amount of time it takes to modify kubeconfig files with large amounts of contexts (#67093, @juanvallejo)
- Fixes issue when updating a DaemonSet causes a hash collision. (#66476, @mortent)
- fix cluster-info dump error (#66652, @charrywanganthony)
- The PodShareProcessNamespace feature to configure PID namespace sharing within a pod has been promoted to beta. (#66507, @verb)
- `kubectl create {clusterrole,role}`'s `--resources` flag supports asterisk to specify all resources. (#62945, @nak3)
- Bump up version number of debian-base, debian-hyperkube-base and debian-iptables. (#67026, @satyasm)
  - Also updates dependencies of users of debian-base.
  - debian-base version 0.3.1 is already available.
- DynamicProvisioningScheduling and VolumeScheduling is now supported for Azure managed disks. Feature gates DynamicProvisioningScheduling and VolumeScheduling should be enabled before using this feature. (#67121, @feiskyer)

- kube-apiserver now includes all registered API groups in discovery, including registered extension API group/versions for unavailable extension API servers. (#66932, @nilebox)
- Allows extension API server to dynamically discover the requestheader CA certificate when the core API server doesn't use certificate based authentication for it's clients (#66394, @rtripat)
- audit.k8s.io api group is upgraded from v1beta1 to v1. (#65891, @CaoShuFeng)
  - Deprecated element metav1.ObjectMeta and Timestamp are removed from audit Events in v1 version.
  - Default value of option --audit-webhook-version and --audit-log-version will be changed from `audit.k8s.io/v1beta1` to `audit.k8s.io/v1` in release 1.13
- scope AWS LoadBalancer security group ICMP rules to spec.loadBalancerSourceRanges (#63572, @haz-mat)
- Add NoSchedule/NoExecute tolerations to ip-masq-agent, ensuring it to be scheduled in all nodes except master. (#66260, @tanshanshan)
- The flag `--skip-preflight-checks` of kubeadm has been removed. Please use `--ignore-preflight-errors` instead. (#62727, @xiangpengzhao)
- The watch API endpoints prefixed with `/watch` are deprecated and will be removed in a future release. These standard method for watching resources (supported since v1.0) is to use the list API endpoints with a `?watch=true` parameter. All client-go clients have used the parameter method since v1.6.0. (#65147, @liggitt)
- Bump Heapster to v1.6.0-beta.1 (#67074, @kawych)
- kube-apiserver: setting a `dryRun` query parameter on a CONNECT request will now cause the request to be rejected, consistent with behavior of other mutating API requests. Examples of CONNECT APIs are the `nodes/proxy`, `services/proxy`, `pods/proxy`, `pods/exec`, and `pods/attach` subresources. Note that this prevents sending a `dryRun` parameter to backends via `{nodes,services,pods}/proxy` subresources. (#66083, @jennybuckley)
- In clusters where the DryRun feature is enabled, dry-run requests will go through the normal admission chain. Because of this, ImagePolicyWebhook authors should especially make sure that their webhooks do not rely on side effects. (#66391, @jennybuckley)
- Metadata Agent Improvements (#66485, @bmoyles0117)
  - Bump metadata agent version to 0.2-0.0.21-1.
  - Expand the metadata agent's access to all API groups.
  - Remove metadata agent config maps in favor of command line flags.
  - Update the metadata agent's liveness probe to a new /healthz handler.
  - Logging Agent Improvements
  - Bump logging agent version to 0.2-1.5.33-1-k8s-1.
  - Appropriately set log severity for k8s_container.
  - Fix detect exceptions plugin to analyze message field instead of log field.
  - Fix detect exceptions plugin to analyze streams based on local resource id.
  - Disable the metadata agent for monitored resource construction in logging.
  - Disable timestamp adjustment in logs to optimize performance.
  - Reduce logging agent buffer chunk limit to 512k to optimize performance.
- kubectl: the wait command now prints an error message and exits with the code 1, if there is no resources matching selectors (#66692, @m1kola)
- Quota admission configuration api graduated to v1beta1 (#66156, @vikaschoudhary16)
- Unit tests for scopes and scope selectors in the quota spec (#66351, @vikaschoudhary16)
- Print kube-apiserver --help flag help in sections. (#64517, @sttts)
- Azure managed disks now support availability zones and new parameters `zoned`, `zone` and `zones` are added for AzureDisk storage class. (#66553, @feiskyer)
- nodes: improve handling of erroneous host names (#64815, @dixudx)

- remove deprecated shorthand flag `-c` from `kubectl version (--client)` (#66817, @charrywanganthony)
- Added etcd_object_count metrics for CustomResources. (#65983, @sttts)
- Handle newlines for `command`, `args`, `env`, and `annotations` in `kubectl describe` wrapping (#66841, @smarterclayton)
- Fix pod launch by kubelet when --cgroups-per-qos=false and --cgroup-driver="systemd" (#66617, @pravisankar)
- kubelet: fix nil pointer dereference while enforce-node-allocatable flag is not config properly (#66190, @linyouchong)
- Fix a bug on GCE that /etc/crictl.yaml is not generated when crictl is preloaded. (#66877, @Random-Liu)
- This fix prevents a GCE PD volume from being mounted if the udev device link is stale and tries to correct the link. (#66832, @msau42)

v1.12.0-alpha.1

Documentation

Downloads for v1.12.0-alpha.1

filename	sha256 hash
kubernetes.tar.gz	`603345769f5e2306e5c22db928aa1cbedc6af63f387ab7a8818cb0111292133f`
kubernetes-src.tar.gz	`f8fb4610cee20195381e54bfd163fbaeae228d68986817b685948b8957f324d0`

Client Binaries

filename	sha256 hash
kubernetes-client-darwin-386.tar.gz	`e081c275601bcaa45d906a976d35902256f836bb60caa738a2fd8719ff3e1048`
kubernetes-client-darwin-amd64.tar.gz	`2dd222a267ac247dce4dfc52aff313f20c427b4351f7410aadebe8569ede3139`
kubernetes-client-linux-386.tar.gz	`46b16d6b0429163da67b06242772c3c6c5ab9da6deda5306e63d21be04b4811d`
kubernetes-client-linux-amd64.tar.gz	`8b8bf0a8a4568559d3762a72c1095ab37785fc8bbbb290aaff3a34341a24d7eb`
kubernetes-client-linux-arm.tar.gz	`d71dc60e087746b2832e66170053816dc8ed42e95efe0769ed926a6e044175ef`
kubernetes-client-linux-arm64.tar.gz	`e9091bbfb997d1603dfd17ba9f145ca7dacf304f04d10230e056f8a12ce44445`
kubernetes-client-linux-ppc64le.tar.gz	`fc6c0985ccbd806add497f2557000f7e90f3176427250e019a40e8acf7c42282`
kubernetes-client-linux-s390x.tar.gz	`b8c64b318d702f6e8be76330fd5da9b87e2e4e31e904ea7e00c0cd6412ab2bcf`
kubernetes-client-windows-386.tar.gz	`cb96e353eb5d400756a93c8d16321d0fac87d6a4f8ad89fda42858f8e4d85e9d`
kubernetes-client-windows-amd64.tar.gz	`003284f983cafc6fd0ce1205c03d47e638a999def1ef4e1e77bfb9149e5f598b`

Server Binaries

filename	sha256 hash
kubernetes-server-linux-amd64.tar.gz	`d9c282cd02c8c3fdbeb2f46abd0ddd257a8449e94be3beed2514c6e30a335a87`
kubernetes-server-linux-arm.tar.gz	`613390ba73f4236feb10bb4f70cbf96e504cf8d598da0180efc887d316b8bc5e`
kubernetes-server-linux-arm64.tar.gz	`1dd417f59d17c3583c6b4a3989d24c57e4989eb7b6ab9f2aa10c4cbf9bf5c11b`
kubernetes-server-linux-ppc64le.tar.gz	`44e9e6424ed3a5a91f5adefa456b2b71c0c5d3b01be9f60f5c8c0f958815ffc1`
kubernetes-server-linux-s390x.tar.gz	`3118d9c955f9a50f86ebba324894f06dbf7c1cb8f9bc5bdf6a95caf2a6678805`

Node Binaries

filename	sha256 hash
kubernetes-node-linux-amd64.tar.gz	`6b4d363d190e0ce6f4e41d19a0ac350b39cad7859bc442166a1da9124d1a82bb`
kubernetes-node-linux-arm.tar.gz	`c80ac005c228217b871bf3e9de032044659db3aa048cc95b101820e31d62264c`
kubernetes-node-linux-arm64.tar.gz	`d8b84e7cc6ff5d0e26b045de37bdd40ca8809c303b601d8604902e5957d98621`
kubernetes-node-linux-ppc64le.tar.gz	`b0a667c5c905e6e724fba95d44797fb52afb564aedd1c25cbd4e632e152843e9`
kubernetes-node-linux-s390x.tar.gz	`78e7dbb82543ea6ac70767ed63c92823726adb6257f6b70b5911843d18288df7`
kubernetes-node-windows-amd64.tar.gz	`1a3e11cc3f1a0297de2b894a43eb56ede5fbd5cdc43e4da7e61171f5c1f3ef60`

Changelog since v1.11.0

Action Required

- action required: the API server and client-go libraries have been fixed to support additional non-alpha-numeric characters in UserInfo "extra" data keys. Both should be updated in order to properly support extra data containing "/" characters or other characters disallowed in HTTP headers. (#65799, @dekkagaijin)
- [action required] The `NodeConfiguration` kind in the kubeadm v1alpha2 API has been renamed `JoinConfiguration` in v1alpha3 (#65951, @luxas)
- ACTION REQUIRED: Removes defaulting of CSI file system type to ext4. All the production drivers listed under https://kubernetes-csi.github.io/docs/drivers.html were inspected and should not be impacted after this change. If you are using a driver not in that list, please test the drivers on an updated test cluster first. (#65499, @krunaljain)
- [action required] The `MasterConfiguration` kind in the kubeadm v1alpha2 API has been renamed `InitConfiguration` in v1alpha3 (#65945, @luxas)
- [action required] The formerly publicly-available cAdvisor web UI that the kubelet started using `--cadvisor-port` is now entirely removed in 1.12. The recommended way to run cAdvisor if you still need it, is via a DaemonSet. (#65707, @dims)

- Cluster Autoscaler version updated to 1.3.1-beta.1. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.3.1-beta.1 (#65857, @aleksandra-malinowska)
  - Default value for expendable pod priority cutoff in GCP deployment of Cluster Autoscaler changed from 0 to -10.
  - action required: users deploying workloads with priority lower than 0 may want to use priority lower than -10 to avoid triggering scale-up.
- [action required] kubeadm: The `v1alpha1` config API has been removed. (#65628, @luxas)
  - Please convert your `v1alpha1` configuration files to `v1alpha2` using the
  - `kubeadm config migrate` command of kubeadm v1.11.x
- kube-apiserver: the `Priority` admission plugin is now enabled by default when using `--enable-admission-plugins`. If using `--admission-control` to fully specify the set of admission plugins, the `Priority` admission plugin should be added if using the `PodPriority` feature, which is enabled by default in 1.11. (#65739, @liggitt)
- The `system-node-critical` and `system-cluster-critical` priority classes are now limited to the `kube-system` namespace by the `PodPriority` admission plugin. (#65593, @bsalamat)
- kubernetes-worker juju charm: Added support for setting the --enable-ssl-chain-completion option on the ingress proxy. "action required": if your installation relies on supplying incomplete certificate chains and using OCSP to fill them in, you must set "ingress-ssl-chain-completion" to "true" in your juju configuration. (#63845, @paulgear)
- In anticipation of CSI 1.0 in the next release, Kubernetes 1.12 calls the CSI `NodeGetInfo` RPC instead of `NodeGetId` RPC. Ensure your CSI Driver implements `NodeGetInfo(...)` before upgrading to 1.12. @saad-ali
- Kubernetes 1.12 also enables Kubelet device plugin registration feature by default. Before upgrading to 1.12, ensure the `driver-registrar` CSI sidecar container for your CSI driver is configured to handle plugin registration (set the `--kubelet-registration-path` parameter on `driver-registrar` to expose a new unix domain socket to handle Kubelet Plugin Registration).

Other notable changes

- admin RBAC role now aggregates edit and view. edit RBAC role now aggregates view. (#66684, @deads2k)
- Speed up HPA reaction to metric changes by removing scale up forbidden window. (#66615, @jbartosik)
  - Scale up forbidden window was protecting HPA against making decision to scale up based on metrics gathered during pod initialisation (which may be invalid, for example pod may be using a lot of CPU despite not doing any "actual" work).
  - To avoid that negative effect only use per pod metrics from pods that are:
  - ready (so metrics about them should be valid), or
  - unready but creation and last readiness change timestamps are apart more than 10s (pods that have formerly been ready and so metrics are in at least some cases (pod becoming unready because of overload) very useful).
- The `kubectl patch` command no longer exits with exit code 1 when a redundant patch results in a no-op (#66725, @juanvallejo)
- Improved the output of `kubectl get events` to prioritize showing the message, and move some fields to `-o wide`. (#66643, @smarterclayton)
- Added CPU Manager state validation in case of changed CPU topology. (#66718, @ipuustin)
- Make EBS volume expansion faster (#66728, @gnufied)
- Kubelet serving certificate bootstrapping and rotation has been promoted to beta status. (#66726, @liggitt)
- Flag --pod (-p shorthand) of kubectl exec command marked as deprecated (#66558, @quasoft)

- Fixed an issue which prevented `gcloud` from working on GCE when metadata concealment was enabled. (#66630, @dekkagaijin)
- Azure Go SDK has been upgraded to v19.0.0 and VirtualMachineScaleSetVM now supports availability zones. (#66648, @feiskyer)
- kubeadm now can join the cluster with pre-existing client certificate if provided (#66482, @dixudx)
- If `TaintNodesByCondition` enabled, taint node with `TaintNodeUnschedulable` when (#63955, @k82cn)
    - initializing node to avoid race condition.
- kubeadm: remove misleading error message regarding image pulling (#66658, @dixudx)
- Fix Stackdriver integration based on node annotation container.googleapis.com/instance_id. (#66676, @kawych)
- Fix kubelet startup failure when using ExecPlugin in kubeconfig (#66395, @awly)
- When attaching iSCSI volumes, kubelet now scans only the specific (#63176, @bswartz)
    - LUNs being attached, and also deletes them after detaching. This avoids
    - dangling references to LUNs that no longer exist, which used to be the
    - cause of random I/O errors/timeouts in kernel logs, slowdowns during
    - block-device related operations, and very rare cases of data corruption.
- kubeadm: Pull sidecar and dnsmasq-nanny images when using kube-dns (#66499, @rosti)
- Extender preemption should respect IsInterested() (#66291, @resouer)
- Properly autopopulate OpenAPI version field without needing other OpenAPI fields present in generic API server code. (#66411, @DirectXMan12)
- renamed command line option --cri-socket-path of the kubeadm subcommand "kubeadm config images pull" to --cri-socket to be consistent with the rest of kubeadm subcommands. (#66382, @bart0sh)
- The --docker-disable-shared-pid kubelet flag has been removed. PID namespace sharing can instead be enable per-pod using the ShareProcessNamespace option. (#66506, @verb)
- Add support for using User Assigned MSI (https://docs.microsoft.com/en-us/azure/active-directory/managed-service-identity/overview) with Kubernetes cluster on Azure. (#66180, @kkmsft)
- fix acr could not be listed in sp issue (#66429, @andyzhangx)
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63665, @xchapter7x)
    - Some refactoring of error/status messages and functions to align with new approach.
- Fix volume limit for EBS on m5 and c5 instance types (#66397, @gnufied)
- Extend TLS timeouts to work around slow arm64 math/big (#66264, @joejulian)
- kubeadm: stop setting UID in the kubelet ConfigMap (#66341, @runiq)
- kubectl: fixes a panic displaying pods with nominatedNodeName set (#66406, @liggitt)
- Update crictl to v1.11.1. (#66152, @Random-Liu)
- fixes a panic when using a mutating webhook admission plugin with a DELETE operation (#66425, @liggitt)
- GCE: Fixes loadbalancer creation and deletion issues appearing in 1.10.5. (#66400, @nicksardo)
- Azure nodes with availability zone now will have label `failure-domain.beta.kubernetes.io/zone=<region>-<zoneID>` . (#66242, @feiskyer)
- Re-design equivalence class cache to two level cache (#65714, @resouer)
- Checks CREATE admission for create-on-update requests instead of UPDATE admission (#65572, @yue9944882)
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63666, @xchapter7x)
    - Some refactoring of error/status messages and functions to align with new approach.
- Fixed a panic in the node status update logic when existing node has nil labels. (#66307, @guoshimin)
- Bump Ingress-gce version to 1.2.0 (#65641, @freehan)
- Bump event-exporter to 0.2.2 to pick up security fixes. (#66157, @loburm)
- Allow ScaleIO volumes to be provisioned without having to first manually create /dev/disk/by-id path on each kubernetes node (if not already present) (#66174, @ddebroy)

- fix rollout status for statefulsets (#62943, @faraazkhan)
- Fix for resourcepool-path configuration in the vsphere.conf file. (#66261, @divyenpatel)
- OpenAPI spec and documentation reflect 202 Accepted response path for delete request (#63418, @roycaihw)
- fixes a validation error that could prevent updates to StatefulSet objects containing non-normalized resource requests (#66165, @liggitt)
- Fix validation for HealthzBindAddress in kube-proxy when --healthz-port is set to 0 (#66138, @wsong)
- kubeadm: use an HTTP request timeout when fetching the latest version of Kubernetes from dl.k8s.io (#65676, @dkoshkin)
- Support configuring the Azure load balancer idle connection timeout for services (#66045, @cpuguy83)
- `kubectl config set-context` can now set attributes of the current context, like the current namespace, by passing `--current` instead of a specific context name (#66140, @liggitt)
- The alpha `Initializers` admission plugin is no longer enabled by default. This matches the off-by-default behavior of the alpha API which drives initializer behavior. (#66039, @liggitt)
- kubeadm: Default component configs are printable via kubeadm config print-default (#66074, @rosti)
- prevents infinite CLI wait on delete when item is recreated (#66136, @deads2k)
- Preserve vmUUID when renewing nodeinfo in vSphere cloud provider (#66007, @w-leads)
- Cluster Autoscaler version updated to 1.3.1. Release notes: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.3.1 (#66122, @aleksandra-malinowska)
- Expose docker registry config for addons used in Juju deployments (#66092, @kwmonroe)
- kubelets that specify `--cloud-provider` now only report addresses in Node status as determined by the cloud provider (#65594, @liggitt)
    - kubelet serving certificate rotation now reacts to changes in reported node addresses, and will request certificates for addresses set by an external cloud provider
- Fix the bug where image garbage collection is disabled by mistake. (#66051, @jiaxuanzhou)
- fixes an issue with multi-line annotations injected via downward API files getting scrambled (#65992, @liggitt)
- kubeadm: run kube-proxy on non-master tainted nodes (#65931, @neolit123)
- "kubectl delete" no longer waits for dependent objects to be deleted when removing parent resources (#65908, @juanvallejo)
- Introduce a new flag `--keepalive` for kubectl proxy to allow setting keep-alive period for long-running request. (#63793, @hzxuzhonghu)
- If Openstack LoadBalancer is not defined in cloud config, the loadbalancer is not initialized any more in openstack. All setups must have some setting under that section (#65781, @zetaab)
- Re-adds `pkg/generated/bindata.go` to the repository to allow some parts of k8s.io/kubernetes to be go-vendorable. (#65985, @ixdy)
- Fix a bug that preempting a pod may block forever. (#65987, @Random-Liu)
- Fix flexvolume in containarized kubelets (#65549, @gnufied)
- Add volume mode filed to constructed volume spec for CSI plugin (#65456, @wenlxie)
- Fix an issue with dropped audit logs, when truncating and batch backends enabled at the same time. (#65823, @loburm)
- Support traffic shaping for CNI network driver (#63194, @m1093782566)
- kubeadm: Use separate YAML documents for the kubelet and kube-proxy ComponentConfigs (#65787, @luxas)
- kubeadm: Fix pause image to not use architecture, as it is a manifest list (#65920, @dims)
- kubeadm: print required flags when running kubeadm upgrade plan (#65802, @xlgao-zju)
- Fix `RunAsGroup` which doesn't work since 1.10. (#65926, @Random-Liu)

- Running `kubectl describe pvc` now shows which pods are mounted to the pvc being described with the `Mounted By` field (#65837, @clandry94)
- fix azure storage account creation failure (#65846, @andyzhangx)
- Allow kube- and cloud-controller-manager to listen on ports up to 65535. (#65860, @sttts)
- Allow kube-scheduler to listen on ports up to 65535. (#65833, @sttts)
- kubeadm: Remove usage of `PersistentVolumeLabel` (#65827, @xlgao-zju)
- kubeadm: Add a `v1alpha3` API. (#65629, @luxas)
- Update to use go1.10.3 (#65726, @ixdy)
- LimitRange and Endpoints resources can be created via an update API call if the object does not already exist. When this occurs, an authorization check is now made to ensure the user making the API call is authorized to create the object. In previous releases, only an update authorization check was performed. (#65150, @jennybuckley)
- Fix 'kubectl cp' with no arguments causes a panic (#65482, @wgliang)
- bazel deb package bugfix: The kubeadm deb package now reloads the kubelet after installation (#65554, @rdodev)
- fix smb mount issue (#65751, @andyzhangx)
- More fields are allowed at the root of the CRD validation schema when the status subresource is enabled. (#65357, @nikhita)
- Reload systemd config files before starting kubelet. (#65702, @mborsz)
- Unix: support ZFS as a valid graph driver for Docker (#65635, @neolit123)
- Fix controller-manager crashes when flex plugin is removed from flex plugin directory (#65536, @gnufied)
- Enable etcdv3 client prometheus metics (#64741, @wgliang)
- skip nodes that have a primary NIC in a 'Failed' provisioningState (#65412, @yastij)
- kubeadm: remove redundant flags settings for kubelet (#64682, @dixudx)
- Fixes the wrong elasticsearch node counter (#65627, @IvanovOleg)
- Can configure the vsphere cloud provider with a trusted Root-CA (#64758, @mariantalla)
- Add Ubuntu 18.04 (Bionic) series to Juju charms (#65644, @tvansteenburgh)
- Fix local volume directory can't be deleted because of volumeMode error (#65310, @wenlxie)
- kubectl: --use-openapi-print-columns is deprecated in favor of --server-print (#65601, @liggitt)
- Add prometheus scrape port to CoreDNS service (#65589, @rajansandeep)
- fixes an out of range panic in the NoExecuteTaintManager controller when running a non-64-bit build (#65596, @liggitt)
- kubectl: fixes a regression with --use-openapi-print-columns that would not print object contents (#65600, @liggitt)
- Hostnames are now converted to lowercase before being used for node lookups in the kubernetes-worker charm. (#65487, @dshcherb)
- N/A (#64660, @figo)
- bugfix: Do not print feature gates in the generic apiserver code for glog level 0 (#65584, @neolit123)
- Add metrics for PVC in-use (#64527, @gnufied)
- Fixed exception detection in fluentd-gcp plugin. (#65361, @xperimental)
- api-machinery utility functions `SetTransportDefaults` and `DialerFor` once again respect custom Dial functions set on transports (#65547, @liggitt)
- Improve the display of jobs in `kubectl get` and `kubectl describe` to emphasize progress and duration. (#65463, @smarterclayton)
- kubectl convert previous created a list inside of a list. Now it is only wrapped once. (#65489, @deads2k)
- fix azure disk creation issue when specifying external resource group (#65516, @andyzhangx)
- fixes a regression in kube-scheduler to properly load client connection information from a `--config` file that references a kubeconfig file (#65507, @liggitt)
- Fixed cleanup of CSI metadata files. (#65323, @jsafrane)
- Update Rescheduler's manifest to use version 0.4.0. (#65454, @bsalamat)

- On COS, NPD creates a node condition for frequent occurrences of unregister_netdevice (#65342, @dashpole)
- Properly manage security groups for loadbalancer services on OpenStack. (#65373, @multi-io)
- Add user-agent to audit-logging. (#64812, @hzxuzhonghu)
- kubeadm: notify the user of manifest upgrade timeouts (#65164, @xlgao-zju)
- Fixes incompatibility with custom scheduler extender configurations specifying `bindVerb` (#65424, @liggitt)
- Using `kubectl describe` on CRDs that use underscores will be prettier. (#65391, @smarterclayton)
- Improve scheduler's performance by eliminating sorting of nodes by their score. (#65396, @bsalamat)
- Add more conditions to the list of predicate failures that won't be resolved by preemption. (#64995, @bsalamat)
- Allow access to ClusterIP from the host network namespace when kube-proxy is started in IPVS mode without either masqueradeAll or clusterCIDR flags (#65388, @lbernail)
- User can now use `sudo crictl` on GCE cluster. (#65389, @Random-Liu)
- Tolerate missing watch permission when deleting a resource (#65370, @deads2k)
- Prevents a `kubectl delete` hang when deleting controller managed lists (#65367, @deads2k)
- fixes a memory leak in the kube-controller-manager observed when large numbers of pods with tolerations are created/deleted (#65339, @liggitt)
- checkLimitsForResolvConf for the pod create and update events instead of checking period (#64860, @wgliang)
- Fix concurrent map access panic (#65334, @dashpole)
  - Don't watch .mount cgroups to reduce number of inotify watches
  - Fix NVML initialization race condition
  - Fix brtfs disk metrics when using a subdirectory of a subvolume
- Change Azure ARM Rate limiting error message. (#65292, @wgliang)
- AWS now checks for validity of ecryption key when creating encrypted volumes. Dynamic provisioning of encrypted volume may get slower due to these checks. (#65223, @jsafrane)
- Report accurate status for kubernetes-master and -worker charms. (#65187, @kwmonroe)
- Fixed issue 63608, which is that under rare circumstances the ResourceQuota admission controller could lose track of an request in progress and time out after waiting 10 seconds for a decision to be made. (#64598, @MikeSpreitzer)
- In the vSphere cloud provider the `Global.vm-uuid` configuration option is not deprecated anymore, it can be used to overwrite the VMUUID on the controller-manager (#65152, @alvaroaleman)
- fluentd-gcp grace termination period increased to 60s. (#65084, @x13n)
- Pass cluster_location argument to Heapster (#65176, @kawych)
- Fix a scalability issue where high rates of event writes degraded etcd performance. (#64539, @ccding)
- Corrected a mistake in the documentation for wait.PollImmediate(...) (#65026, @spew)
- Split 'scheduling_latency_seconds' metric into finer steps (predicate, priority, premption) (#65306, @shyamjvs)
- Etcd health checks by the apiserver now ensure the apiserver can connect to and exercise the etcd API (#65027, @liggitt)
- Add e2e regression tests for the kubelet being secure (#64140, @dixudx)
- set EnableHTTPSTrafficOnly in azure storage account creation (#64957, @andyzhangx)
- Fixes an issue where Portworx PVCs remain in pending state when created using a StorageClass with empty parameters (#64895, @harsh-px)
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63662, @xchapter7x)
  - Some refactoring of error/status messages and functions to align with new approach.
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63661, @xchapter7x)
  - Some refactoring of error/status messages and functions to align with new approach.

- This PR will leverage subtests on the existing table tests for the scheduler units. (#63660, @xchapter7x)
    - Some refactoring of error/status messages and functions to align with new approach.
- Updated default image for nginx ingress in CDK to match current Kubernetes docs. (#64285, @hyperbolic2346)
- Added block volume support to Cinder volume plugin. (#64879, @bertinatto)
- fixed incorrect OpenAPI schema for CustomResourceDefinition objects (#65256, @liggitt)
- ignore not found file error when watching manifests (#64880, @dixudx)
- add port-forward examples for service (#64773, @MasayaAoyama)
- Fix issues for block device not mapped to container. (#64555, @wenlxie)
- Update crictl on GCE to v1.11.0. (#65254, @Random-Liu)
- Fixes missing nodes lines when kubectl top nodes (#64389, @yue9944882)
- keep pod state consistent when scheduler cache UpdatePod (#64692, @adohe)
- add external resource group support for azure disk (#64427, @andyzhangx)
- Increase the gRPC max message size to 16MB in the remote container runtime. (#64672, @mcluseau)
- The new default value for the --allow-privileged parameter of the Kubernetes-worker charm has been set to true based on changes which went into the Kubernetes 1.10 release. Before this change the default value was set to false. If you're installing Canonical Kubernetes you should expect this value to now be true by default and you should now look to use PSP (pod security policies). (#64104, @CalvinHartwell)
- The --remove-extra-subjects and --remove-extra-permissions flags have been enabled for kubectl auth reconcile (#64541, @mrogers950)
- Fix kubectl drain --timeout option when eviction is used. (#64378, @wrdls)
- This PR will leverage subtests on the existing table tests for the scheduler units. (#63659, @xchapter7x)
    - Some refactoring of error/status messages and functions to align with new approach.