v1.15.12

Documentation

Downloads for v1.15.12

filename	sha512 hash
kubernetes.tar.gz	32543275f6a2e01b23566eb3b72e2be220812208b2bee3ff0daa2fae751a374d59073b08621524415f252c6c264c45054da97594278e6fb011487e884fbc3654
kubernetes-src.tar.gz	b59132d3e1eb57663fa4aaf732b8c4280234af0286df6c7632da7287e9c7329def80955eba375e9f346d944becb8aae734e6f2afa412e9ea19f3140a8c6bcd2a

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	e87b279de3ff4155f7258723589ef9e4e91eafbed962e95f3a00f6a7338d058eb8b3b392d233af5f8df08da66dbb1685142d1779b10310aacd44d853a7c63cf5
kubernetes-client-darwin-amd64.tar.gz	a2cef929980394145af8ebea63a3ba71c73d8788e46ff523c20287052c6ef0b0fa590f4d5fea4a20d62f971c099924022cdd33763a3bdd6141ccfe0234fbc35c
kubernetes-client-linux-386.tar.gz	7c74395ee8ad4700ce143a5e8d06f07280905ddd2bbe59b765f589936476ac28edd2237da83f3422a04f9cd37ddb9bc0ab24c607409fa7902b901c1803a76484
kubernetes-client-linux-amd64.tar.gz	316dcb768c0963259f685a4c433150dca3191379a8f2789f39ff50c47b995f702f6f9de89f54a1a260e9ca9fa19dd020ccf7a0a8435e31fe3a7bc5f81b23a643
kubernetes-client-linux-arm.tar.gz	0ccfa59ff829f406b25ad03c5040904ed7fcf622e2034e420c20fabbfc5b67a9dae5f073bb6975105b9260e26634a76b08950b566ebdb83e5f25f17ef08d52bb
kubernetes-client-linux-arm64.tar.gz	f651ff6adc72ac9bc691274fd6397b4744535ba7a8d4dd1fae1f4a4f4346345964a3fd2e9dc2f9783ab70e932f0511b6046fe9d2cf611ee5fa4f22ae8d9d2ab3
kubernetes-client-linux-ppc64le.tar.gz	d4128aab6954be4539ad119376a642b3e7fb994d50236317cab1a2e74ff602671a46c4d72ba5a35ca5d24d386d4beda2bac57bfdbadb2545614734 00b426e213
kubernetes-client-linux-s390x.tar.gz	70e627bab491c3ec56b31a07ddfe1596bcba78db46ed8c159af15b1fb9aeb14495de995909a0525c2114f5eebfe339c3e2c5bd5cbebce2b1e376fe5bf26e0d1d
kubernetes-client-windows-386.tar.gz	83904a579a0f8051959efe43c84c177ebb4f71ccd715d9ddfb688d79f0aab8190e0a6fb8c3e7d32415827453cab37e3faa6121c092be53898031cd41cc4872b6
kubernetes-client-windows-amd64.tar.gz	9c3572c0d9e66c4e5363525f3ed8faeb9e97df0d8d6737865e1a4a8d40663cbb2bf43dcb41a45e434664ce67c527f4b72212ed7a9a35a7277159fadd029af559

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	f573716e9e5b8e3960adb7cc6c37a81dc826fd7a595902c0e758a86176c1752468cb9b709867bb312276c2cd1a882a2758f617a433d52e20c689245a1df9103e
kubernetes-server-linux-arm.tar.gz	72386115fde83e86e38d1777de04de7022df04e857979002d34a2610efe8dddd4e7e974e85b0709815b55bda1ede76f6de48e793b37dc1c973a56d8adf96bedc
kubernetes-server-linux-arm64.tar.gz	033a07c2fda8218e7ec9d9869fda0813681fc6d66d6c714c38323ac6a4ff412fe80704c82d9859dfbe7d185225d0442d80fcc97c578e2ce5b3bfed7dea8be577
kubernetes-server-linux-ppc64le.tar.gz	526459d2abbdf2a906c25667f3a6b61044feb894bef36cbb0b08f9258a4c1397af095ea864b2c1f89390b689281582a5926538afa045a369b026e01691c70772

kubernetes-server-linux-s390x.tar.gz	3a8de1b8a323a01fea48a954d3498d59010f4601713ab8dbcbefbb6110c1b5e26dcade5017389f84f98b4077026a93ee3f77d8e083d65c1ce6dcb6769756bae7

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	b125ebc957bb56878b50275e52c5d4b8f1122f21c56e3132d91fe96259fc63f3ce716d5030e3854815a34589868b5c278b1dad3e822bed88c623b263d9c11f3d
kubernetes-node-linux-arm.tar.gz	074bf07b1f5d95650b70f59eb3288ba87b1010332ec97d2af1da75450de04a383f4426836dbbbd30ab1361955275e092cdefe04a28cd1e8b8d3abc3a3ddf179a
kubernetes-node-linux-arm64.tar.gz	9bdb9d5636d8f4f856472cf86a252571cc1f9bddf48bb7cb6d16ceadbf76ff7bf994ab6ae2de9a72741a0135232badf426f4f14e7bcc959954f55a82584f13b1
kubernetes-node-linux-ppc64le.tar.gz	e05f4a19767038ac29a936d009d0444e54930903b97c4d8db467e21dde50805fdd0695c75593cd3871d932768a397fed7f3912e8eb2ef65c1556279126a7f6e9
kubernetes-node-linux-s390x.tar.gz	08ab9b8f53d0fc06c0897fd7214327411495af4ce81a3ecbabe1e6e22fb05d881c64f35c4624b09191acb4da7e64e6fd5dc7ea3e3b920bea39720bf1c9f31fba
kubernetes-node-windows-amd64.tar.gz	455830f75a1da055424b274a1d9dd006ba871c792378f3d5f9dc56feb360016f807c20ea06607b813f9dff675e1aec5cfe686fac5643dc1d56c845e4d9a24915

Changelog since v1.15.11

Changes by Kind

Bug or Regression

- Client-go: resolves an issue with informers falling back to full list requests when timeouts are encountered, rather than re-establishing a watch. (#89978, @liggitt) [SIG API Machinery and Testing]
- Fix invalid VMSS updates due to incorrect cache (#89002, @ArchangelSDY) [SIG Cloud Provider]
- Fix the VMSS name and resource group name when updating Azure VMSS for LoadBalancer backendPools (#89337, @feiskyer) [SIG Cloud Provider]
- Fix: check disk status before delete azure disk (#88360, @andyzhangx) [SIG Cloud Provider]
- Fixed a data race in kubelet image manager that can cause static pod workers to silently stop working. (#88915, @roycaihw) [SIG Node]
- Fixed an issue that could cause the kubelet to incorrectly run concurrent pod reconciliation loops and crash. (#89055, @tedyu) [SIG Node]
- Fixes conversion error for HorizontalPodAutoscaler objects with invalid annotations (#89969, @liggitt) [SIG Autoscaling]
- Fixes conversion error in multi-version custom resources that could cause metadata.generation to increment on no-op patches or updates of a custom resource. (#88995, @liggitt) [SIG API Machinery]
- For GCE cluster provider, fix bug of not being able to create internal type load balancer for clusters with more than 1000 nodes in a single zone. (#89902, @wojtek-t) [SIG Cloud Provider, Network and Scalability]
- For volumes that allow attaches across multiple nodes, attach and detach operations across different nodes are now executed in parallel. (#89241, @verult) [SIG Apps, Node and Storage]
- Kubelet metrics gathered through metrics-server or prometheus should no longer timeout for Windows nodes running more than 3 pods. (#87730, @marosset) [SIG Node, Testing and Windows]

Other (Cleanup or Flake)

- Build: Bump kube-cross to v1.12.17-2 (#90760, @justaugustus) [SIG Release]
- Reduce event spam during a volume operation error. (#89794, @msau42) [SIG Storage]

v1.15.11

Documentation

Downloads for v1.15.11

filename	sha512 hash
kubernetes.tar.gz	7834a01bf5e4cc5d93791f0dce512ff8f40c92e588c980567fb6d715bb707a650511495d323cd27e5e8f524577efb04adb07478ecbe55876f32c7f1cc055e907
kubernetes-src.tar.gz	e6cd82ae8e257328c64e518bd9056b91b5827f9f4e31071c2bf2175f83848b8a0b30228117e68a9f52028d899165100d89182af9c7447677cc503f7916b7fcf6

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	48f7e3346abb3c5fabc4789ff335a2816d5251444c096b2153df0791bb7d9d03ba678f5bdf92504326cebad35994437bd43c0aff1268f424b36840f1a9133d74
kubernetes-client-darwin-amd64.tar.gz	24a13ccab183a425e633710703878e80498057d751412a6a864de4890978f41e09dcd0b7523ffb609ca903f713149a3ae74741d80067a550b132b62251128435
kubernetes-client-linux-386.tar.gz	e976b23e3f2093dfd7bbb0db6877d33103627e8d1ef5a37bbb673b103898fcb0a1eb3c732e50403fc42acf5866fd528b0eeb7037912e3bd3896ef60f222c72ae
kubernetes-client-linux-amd64.tar.gz	af50d838bf27758169368bd2129249ff3b617df98b43c9e7ba1a63a73613ed1bb36b9bd3673e02083ec23b3f1b4ee66bb3f27df00c31d5ee4e464265de13c529

kubernetes-client-linux-arm.tar.gz	c2b389290c20b33856b0bd598793768a28406701533e2ce6b622ca3c05f145ed809c61f90d1e6c88c684b7e66cfca29c8f6e6ab3b573d238caf56af2a948a74d
kubernetes-client-linux-arm64.tar.gz	5cab716ed8354e51edf41e2a2e83674d95ba43bebe9e3fa8be1b556528c82fa1c1ac61ecd90d093de131427705068858de8c84f9e31ed768a137566467afadb5
kubernetes-client-linux-ppc64le.tar.gz	5079afde78b02e6a785a764834b070d360245a817f4e475bac5f5a60628500cdb2a46895b332e73405663b488583b1ce4200fa63e0013c3f9b1a514dee6510e6
kubernetes-client-linux-s390x.tar.gz	06bc06766c45fee752b76793c4f955dbadb27702689c0f98639bb58b97f1652876f0fe8853278f55fd61d7e3d1aa050fb1ec12242ab274fa1f2fca42f9528e9f
kubernetes-client-windows-386.tar.gz	8719e4edd7d4c79254ee3cf551ac37d4d91072a99b3a4d574b2aa266a664f5e819ba093950c7010c154dd1e41539f60f4a5d926ce9d2997542ecf2f77dc2d10b
kubernetes-client-windows-amd64.tar.gz	fb66bbef53dac95c82d77fed9f0b46d9f42d21f26de9f9f1575cbda43dcc7416eebaf6195558818cb59e68fc7977218b12ddaedcd47c45281939664cff19edab

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	ec7f5d443e9135f9561c78ffadf8d4234cd05e8676d1a442deed444f82b49e435f3321d3dbd79d11acddb5207aca9940adf632d8e7f1cf87ffdb1b664118b329
kubernetes-server-linux-arm.tar.gz	807fd30aea7998a442c79535cecbce7a0d8a0b0aefb52c77230b8c87aa17342c548810ae21e2a0249a6bacbe266f05c531a6532f418dee5e348c510ca5bc459b
kubernetes-server-linux-arm64.tar.gz	948b44fafd47793f03ecafe44de68d3a470a47a50f3321914ceada260dae2ff78cb6465b5e59c95147be6fabe51c619e8493c068f49d690ce2221dc125e1e5f8
kubernetes-server-linux-ppc64le.tar.gz	ee3ad93e4707046e50c833915a465dafbc9980ee2716043429843166 8e327757db9829b372de26da5ddd2f364bd2b2548a1c5447dd1ed400e594ff616f59f446
kubernetes-server-linux-s390x.tar.gz	2e468e85c33fc228e1abc945cb6b0f964b6d8ae9279ccf425b56674105f17161c3b8800d8e158337fb6cf9e29076b724c3b1290dab515438384c06064e6953c6

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	cd128ef0c9b1f8db22b54b6f6369e54e9dfbffe9e41e8063bda7b69fd1e067088e750de2a5e086d88f36d35be264be46d4eccb033cdcd8e890288493ca2dd0eb
kubernetes-node-linux-arm.tar.gz	d4f22417cf17fbfe5e051874ec68fa9a99918b0b08eebe57e208cb7f54aab3985fbe2ae8cea70d53857be9bdeaed01f0e33f283ff05e07b09bb713cef9c3d798
kubernetes-node-linux-arm64.tar.gz	72656759519ebc4631270f67d466e011f911c480ac6dec65006384b8a951508bde90d58bf15e3ca1c10c15ed204596d8a92f9b05a05351e7c4640d9b6edb1b11
kubernetes-node-linux-ppc64le.tar.gz	cbf4e915a8f7e16e2c81ccb2989f78cd0c7fb91a7a87948442be9b250a53ca73b5a7deac41e0c47dd1d744e8bc23d374148dfd4f6871d0475fb7fa1d959146c6
kubernetes-node-linux-s390x.tar.gz	1d75676fd3f70922a499d6578d8c44c0aa61c60aa23f866c6ba086778ada590c76c00c14a2258f64886a4b2427cb391765e44245e390f586c6771a7f0ae59c8c
kubernetes-node-windows-amd64.tar.gz	b7448e795a80f0b911319c590c7a51964df4d5d3d594d53c9c515f8f4cd43c0710c742afeacf368ee8f35fa5921e261ef91fd0b6afaed9ca302c448daac3b3ca

Changelog since v1.15.10

Changes by Kind

Other (Bug, Cleanup or Flake)

- Add delays between goroutines for vm instance update (#88094, @aramase) [SIG Cloud Provider]
- Bump debian-base to v1.0.1 and debian-iptables to v11.0.3 (#88882, @tallclair) [SIG API Machinery, Cluster Lifecycle, Release and Testing]
- Fix handling of aws-load-balancer-security-groups annotation. Security-Groups assigned with this annotation are no longer modified by kubernetes which is the expected behaviour of most users. Also no unnecessary Security-Groups are created anymore if this annotation is used. (#88691, @Elias481) [SIG Cloud Provider]
- Fix route conflicted operations when updating multiple routes together (#88209, @feiskyer) [SIG Cloud Provider]
- Fix the problem where couple nodes becoming NotReady at the same time could cause master instability or even complete outage in large enough clusters. (#88962, @mborsz) [SIG Apps]
- Fix: add remediation in azure disk attach/detach (#88444, @andyzhangx) [SIG Cloud Provider]
- Fix: azure file mount timeout issue (#88610, @andyzhangx) [SIG Cloud Provider and Storage]
- Fix: corrupted mount point in csi driver (#88569, @andyzhangx) [SIG Storage]
- Fix: get azure disk lun timeout issue (#88158, @andyzhangx) [SIG Cloud Provider and Storage]
- Fixed `threadSafeMap` high memory usage caused by indices that have churn of high-cardinality keys. E.g. namespaces (#88005, @patrickshan) [SIG API Machinery]
- Fixes issue where you can't attach more than 15 GCE Persistent Disks to c2, n2, m1, m2 machine types. (#88602, @yuga711) [SIG Storage]
- Fixes kubelet crash in client certificate rotation cases (#88079, @liggitt) [SIG API Machinery, Auth and Node]
- Get-kube.sh uses the gcloud's current local GCP service account for auth when the provider is GCE or GKE instead of the metadata server default (#88383, @BenTheElder) [SIG Cluster Lifecycle]
- Limit number of instances in a single update to GCE target pool to 1000. (#87881, @wojtek-t) [SIG Cloud Provider, Network and Scalability]

- Update golang to go1.12.17 (#88551, @justaugustus) [SIG Release and Testing]

v1.15.10

Documentation

Downloads for v1.15.10

filename	sha512 hash
kubernetes.tar.gz	92b18c5b54b10772ba22e10205242fbb565aeb3b4e9ff9c732caa6ebc4bca65665b09187e8e96341905f233372944a178ffb14c1f6313d3975e4c94f8a2ef29d
kubernetes-src.tar.gz	1d4d3ce7e29b7dda6473f39d30b969081cfd24568720183a123f818df34d8f6b8af8159b89cd19e5d26a14062e5598434fb2a402143b9ec28af55c91257f0a6b

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	f6c331d8fe4b7e1dc8c8b103b2fb10663d8547690ea8afbff6f35d7b6db0f8d11c58d278b11bbcb3745562ff69667fd872ebd6f8b8ec3d0808e41bfea826a1d9
kubernetes-client-darwin-amd64.tar.gz	4d07a3c1764312d6b8b6732c3c94e90bf88fb7b0e5572191fbdd2106e9d380490dd048e35be9bb5ad04b741e09d906002e340dd15fadefd3714c668c00ce819e
kubernetes-client-linux-386.tar.gz	9648e98c7d802e79c271e17a8b808ea070b957beafbb955a7e877abf04b70e08434487f2e6df57892f82fc484e9b89ec676c2863bbcb1604f260bd4182a52544
kubernetes-client-linux-amd64.tar.gz	02037072280ca4697acc6ea9f75e8f21050b740268861cbd9d2aa0b811d7812527140ec48d6eda48bc2b42ac3bd13612efe44456bf7b178848b968b41addf7ab
kubernetes-client-linux-arm.tar.gz	e0839df03e8bc56102e05c0e65ab7fbf56f95dd5eefc488843744f22956ab1445558dddb7483feb96013260ea714d62dfb441fca20756699c17504d5ef1ff61c
kubernetes-client-linux-arm64.tar.gz	c0403fec42e345791cdb813943411b9f9f3cccb55db3d8e5a6185d1619b01a94eab3e3adad7f00d746b76f888dd881162d7edfbcf1b887d7b99b3ce504154f51
kubernetes-client-linux-ppc64le.tar.gz	81c4c7bb734532795a24d4dd2a37fa2dc74283e4061fdda418902b27be394ba3174729aeb6112647dafd2e1c5d29ca6bd428e745e068fd6362460765291d0e6a
kubernetes-client-linux-s390x.tar.gz	93d20c013acaceedc4010f18aa58664c3c53a1180f64390cdb4b3486e006de8796ab13ff2e42656cbe1c76919a08afd2cd23d8f1aa07ecaea24c08babdf8f715
kubernetes-client-windows-386.tar.gz	abf261a3d462f1de66481ee0f14a7bea32e6637ef1fb0836770438e9d445f9f3e5acd5ef7592fdc5ac27ca96bf3de6027f7ec71b95bf7af3b088215187c63c2c
kubernetes-client-windows-amd64.tar.gz	046768f1f657da26464c641903cfc58b9c0bad6b5aedcba1528ec6be114aa918959e69c52159af4f9d232cedd18619682b2cf1287fcc39564c497a2f6227230c

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	c158dee03c28d75cf9f76da945a7adef96024239aa6a9a458d8fbc0ee405741350b84cb499a217a4c0aecb657fc1677bb314907e4caf8908e94cb82eb8ba2604
kubernetes-server-linux-arm.tar.gz	843d67662d31b0e5539763626be484841f8fd2bfed620a5211d32e898dc73a5cedf1060dbf7c6c44780b11dfef85db449742f1fb38232318c9b65a4a93c65419
kubernetes-server-linux-arm64.tar.gz	574671ac6f4df9d08ee910316d435127201c13497c9312f6face1eca1f819a8f7ac66d0151046bc49a4c03cce9e5024c485a8f7795fcfe750116653f85f9462e
kubernetes-server-linux-ppc64le.tar.gz	6b7162583bbcf84f8d6a3a90e92ee522386a6109e8c7e816b9459da6a690336375c49a05359767c7af9acc5778965c7df46a041e2fb2711e5aa361693654c5a4
kubernetes-server-linux-s390x.tar.gz	716d6963ab4f6aea2f32c84a7032151d3e04d53effc908a6fa19c6c7d66df3aab133c201dfc4117d5ad29fa2940a8d922f225f3223008229142c1b4fb3175719

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	64c656a1a90167e8c91725e25b4571c5efccee4a4bfe2307857c78c15446b9965d26d8a5dbdeab047c32e8a806ee7bb4b1723fbfe8b27a63cfad7fa1708951d0
kubernetes-node-linux-arm.tar.gz	f67af32b05aae4ed98c242939216ffb4d5ea5095869f82ad96f76ca9726a2b0b4d6eaaf03494e7cfd924a5036416e268e330dfd321e17676b8ee269324217d04
kubernetes-node-linux-arm64.tar.gz	bacb548a2d65ab22bfd50756df323770d0a8e5dab8b2fcd9e374280ac5ea871c126df79f323a156f6fc355ffa4ca58619837a7ccf65dc2ba17ecf8aeab21a1a1
kubernetes-node-linux-ppc64le.tar.gz	4e77cf4eb7798af37898eac8b6fe256b6e0a50ab3016c9b87afde7eb540372ff29745d99feffdb28c774572980c0d4651ed3c9feba007e3ca5179aa15fd27886
kubernetes-node-linux-	2d8b7edfdb995546d8c2eb13d9eef9d7c54cab977af561f42595b4a3dd57aef64612b6ee554b45f1e9026a5ac8d31bbb18a53aa11594a5f01ad75713c3cf3315

s390x.tar.gz	
kubernetes-node-windows-amd64.tar.gz	56a0b5f6edc1ac885d2f67d3bc07ca0247a1e5cdb32dc659e659aa4f70d4974a27f5fc3dcc71b42e70f13aa211291232c95e8ddb2c6eb14c1db5a17fab07817d

Changelog since v1.15.9

Changes by Kind

Other (Bug, Cleanup or Flake)

- Fix the bug PIP's DNS is deleted if no DNS label service annotation isn't set. (#87310, @nilo19) [SIG Cloud Provider]
- Fix: set nil cache entry based on old cache (#87593, @aramase) [SIG Cloud Provider]
- Fixed a bug which could prevent a provider ID from ever being set for node if an error occurred determining the provider ID when the node was added. (#87043, @zjs) [SIG Apps and Cloud Provider]
- Fixed the following
  - AWS Cloud Provider attempts to delete LoadBalancer security group it didn't provision
  - AWS Cloud Provider creates default LoadBalancer security group even if annotation [service.beta.kubernetes.io/aws-load-balancer-security-groups] is present (#87208, @bhagwat070919) [SIG Cloud Provider]
- Kubelet metrics have been changed to buckets. For example the exec/{podNamespace}/{podID}/{containerName} is now just exec. (#87913, @cheftako) [SIG Node]
- Openstack: Do not delete managed LB in case of security group reconciliation errors (#82264, @multi-io) [SIG Cloud Provider]
- Reverted a kubectl azure auth module change where oidc claim spn: prefix was omitted resulting a breaking behavior with existing Azure AD OIDC enabled api-server (#87507, @weinong) [SIG API Machinery, Auth and Cloud Provider]
- The client label for apiserver_request_count and apiserver_request_total now no-opts and merely records an empty string. (#87673, @logicalhan) [SIG API Machinery, Instrumentation and Scalability]

v1.15.9

Documentation

Downloads for v1.15.9

filename	sha512 hash
kubernetes.tar.gz	0dddd6fe4c0912340f36bb6f09769e5ce2ede2879324973ab574bf92563e948b9a18efaa6ddf50a16e4001a16500463a2c6fa604fd2c4275c7d1aa141a350bbf
kubernetes-src.tar.gz	76e66827282b4904cda34341930b27ae85561127a8c0365163ba39ee6289d888080d60a03af5fa12e42365ddd468d7519e07c2b327d327c3857b34a23ab718af

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	e485484ecf0c01f7bde6dde4ea56e97f3ef70c95790cdd4571c2c10f5393681b429589619d335277b99b424c14c48d7058d4cf6890927d9f3a5193016c352787
kubernetes-client-darwin-amd64.tar.gz	ed95d30c7f73722b270c85670f7873a90149760cf503f23aff62d84d4189bcef9ba93b4202dad6d264959bf759171aff7eda3baaf2813ac236edc66cb152835b
kubernetes-client-linux-386.tar.gz	f6207ad0792dd1991e5024138eb4a9f0a74a36e921384b350d6cb2dd4884bd33bafba7e49ea65538104634c1775312da684a645e98b0de01137926f9f6d1d60e
kubernetes-client-linux-amd64.tar.gz	ca3b41e6374f442ba680f0b738c7a7cb10168868f15772e09b3ebc3686bb69e95c1a36e700ac0f12b8c4b5184b153a127f60655093fcb208412322071d1ff7e4
kubernetes-client-linux-arm.tar.gz	ed618f116312a31a371bfeaa34fb0565d4789b32fe4f9911d54a27d7459991506ca4336191c1b5f50703895cfd78148d756de11f16149a0655b9a3d863bc98ef
kubernetes-client-linux-arm64.tar.gz	ed0e24f50198fa017755c1e0c297839b1a93663d8df6d0adedaaa7982cbe130ceac93fcf6b063d90917defa661261332278e7c7f2f54e2c2bda2b2c033071b36
kubernetes-client-linux-ppc64le.tar.gz	25d5aa5de3a2243441bd4e255ba7d2f3c5ac30692c7ac0f565fe9ea3fc4c8838474dac0cda489847b79f55179ad77ffbdbfc34b5c365a5864ca30e60b23f7a97
kubernetes-client-linux-s390x.tar.gz	469349b3bcb2212d0327ab6f0c6aceb34a75b4c23b36ec18121969b041365852dc4d12eb95199f5435fea1422e1b08166365c8b12a7dbe2d673217fb1212436d
kubernetes-client-windows-386.tar.gz	d3619ebee5b84a82532a9e13847a20dcb58b59c4168f05e49927eeb4dc72de9f501b9e247c3e5b41edded49e7b33755cc2eaf9917a9e821668fe0420f107df52
kubernetes-client-windows-amd64.tar.gz	6cd71eec1841dd1bc0c21a87101b0e1b1c55b554833ae38fe158565ab50834d37592cbe03eeaa901b1405be1004de9a254b07c79c33d6da6b87cc11fc363c5da

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	6f56b112d8a1c03b07c6a160a7c80b039b30c3486d1c465b5ee3eb91566139d3bbd5ccb41297e9778e4e2bbd01be0f01f27eef8562a0526bef190e79b3be71a5
kubernetes-server-linux-arm.tar.gz	118f4ca5c1d34b0ac011b5cb587f318fea62dda4a79071062b6146e119ef943abfdf8c6e1c57c7e77768428e0c3a517c4dee3aa058d5f55684de8ef891749ee9

kubernetes-server-linux-arm64.tar.gz	b17a941d61e632e20dbeed7cb90e07d41f29b3c7fbb2eff4c721e4f86f948fbaf0f60002f418795e6846c7a7a4067974439cff53d054db662ddfae94f8b19ec2
kubernetes-server-linux-ppc64le.tar.gz	6cce1f0b5d11824c4c236c08ebf276eec3263b1667a44f697dd129cf562ae741262851367f9bde0060cd19babcadaef84ecfa19e036a87a26ba8d996f4a6fbcd
kubernetes-server-linux-s390x.tar.gz	07952b71be443419149e29f3118bdf5ff2f4f1b5db6d36709f66876c91abcb9396ef9d16ba0ee5b688cb61350ccdf413b96f05cf967642eda6e4eb6c0fbb6ef7

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	52687f9a0101c748d81117a26c07dff6038cfbd2418051244ab080a9e910b2dea6db645ba9170396fab26b5f53ca3d0a136e371d7bca8e28125f04d99a2a4804
kubernetes-node-linux-arm.tar.gz	8ae25a51cd70bca12308e03515cd718397ae6cf1d9fc396f2c70b57920c0d7b888c2cda8b8661819f5858e3654c439486c284143eb9d3b02f57e4bc9ffd4b20b
kubernetes-node-linux-arm64.tar.gz	06b9b9b45e01f07bb8da53c3189cddf987a1b473c9c6a69b5508ca33f52323c7da6c233a3348cadef5dee20b7af6f4f1619052c28797c1cfe046b5d82868131a
kubernetes-node-linux-ppc64le.tar.gz	0ae11f5874e6d887d8d7b5daccd84f04e2e72708a237d859dd43d868883ab092f54c4bca40fee97b04d09ef4f867f65f4a5d943ea15c8d7ca37b0404ff688adc
kubernetes-node-linux-s390x.tar.gz	34504afc96e73a42149ec05f9da25060b13203f6f902c374ba943add6864e79b5b64f9eca0d9c61c235c07395336f4b03cf226a983e4657ac85c306b3917179b
kubernetes-node-windows-amd64.tar.gz	b3141cc3b5792f7ef3a22fa6ae44e707a658341ffdf926ed0f2f292a0b296ad79a3569e66dacf41523b7a81f2ce6d85211088db1b6039bff8fb9e9b701cfba65

Changelog since v1.15.8

No notable changes for this release

v1.15.8

Documentation

Downloads for v1.15.8

filename	sha512 hash
kubernetes.tar.gz	b546b43b3920d5d62a1a326ebf26a57e927c88b583a517eb8774a3ab557808ff484dfd1023b98fde2f4b897b039a6038fe7b0fbeee64038386c33853d0138181
kubernetes-src.tar.gz	fd86c5ad94d1ec1d380be9adbaba3863fe2eba0e5a98480e2f4992befa762f31493b30556a5747d3a1c1dab745a68fad7afee413d828dba8b723b0dbeb23ade1

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	5af004e95d7225e3e38870275b29ea7dc4ec1a8f6306aea6cc56a3751f3bd0c4fbc2fa0fcd8fe39db0e3e7be50e024b37b7571c0c9e533586d4282bead42adf8
kubernetes-client-darwin-amd64.tar.gz	d54c2ad8a2c8de58e9f6eca6221ee147fe310557af008ca28b09e16bb61e681c02e92aafba48f8173a7e940e9a2f1f44b18f4b14df2c5637a51e22dbc9579f39
kubernetes-client-linux-386.tar.gz	526dbe8b0863638f0a2af962aaf64c4cce7d093ebc4e2204289d40e322b4204d713bc0f3a95fd7ac7f02cd02f4b5e6120d9f306c6fc6cab55a8200387c551270
kubernetes-client-linux-amd64.tar.gz	10d39ac0c3f562ba5bf834a0e16f35849105b1e59083bb965f6ce319b4f5836533f68f4fe0de5fd844cd1283a9252299172689ae01666525c22af6e1b9261a9e
kubernetes-client-linux-arm.tar.gz	bbcc781d60fef758e37e64d372f3b03d6c45169bd38109981e201df9ad67e1ce02c6063d9cb9c3328ec026575975c4fe0e7bc31b4f43a7a6c95d4ce713f2c90b
kubernetes-client-linux-arm64.tar.gz	846c77e8f63e6a842d4be4c3283163b0ea2da9eb65d95ca9bac35a506646b27282f648d98df67fa5eec2bb4bc5075548266700421216a22468b0e5bc361fe226
kubernetes-client-linux-ppc64le.tar.gz	9d6250508e4cd2d1a42100bc30511324c8aec561e7c1754344f3ddc208e491a27c62656c3893c7560b86bd75d7a7bd9eacba803eb5b59f60538bd6f872842582
kubernetes-client-linux-s390x.tar.gz	975bfebe781c6915e8677783dc4b9609b9dd6141a4c7bb406b25c07dbadd853840885ec545ea9093dfff613ddbefeb76399e55e7337e4b7e67056b46fbf20bad
kubernetes-client-windows-386.tar.gz	e8ba0b456417afa0ec6c957e6c8619449d650dcc5e0a1f2add0f5c3ead03080b331bdab3c46cccdea8b0d66e6153e4741d2998438e322b4b032b32bce56efc7d
kubernetes-client-windows-amd64.tar.gz	b2c5425ad6d2d5e6e2728797d292421109d31f37ff358f2578a6425ca89f477c05e4a4f65ff17d7baaed2582ecf1bb7e2c907b357e3346ac92a406aae0230647

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	f7f615c1988e9c669b49dbec550ad8b04d357bfa9a0c3eea4a67a205cacf128838f7233f72e54a68857244b718a9080af6bd25598a7752c824f5a59b85e3ee10
kubernetes-server-linux-arm.tar.gz	fa65f20d5fb35c6e831b982cc09ba2020736f0a525e63a71d909c62c3897f57d74d1c9b479c4f890659cfcaa5ce370d8eada123983f266959265c6f40ddecd22
kubernetes-server-linux-arm64.tar.gz	3e10fb3777ee48e067cc2b2476a3a63062b014e315aa799193301b26018ac335eb1ffffba63a5a12969da1a37c2ed779e489f89cb591f0d93dc43a0013ef161b
kubernetes-server-linux-ppc64le.tar.gz	e637da491cfd9b67ae032ba28d350414477093e23465df450cb5842ab6b0f8b938451e8e2276da6dbf0718c5f5c1a66b7b705ddb5dd550a7a49a5da741b64318
kubernetes-server-linux-s390x.tar.gz	83d8432208802f2e6f9cafbc9ff6075db9cd5f365aa2c72cfd1ed5ee674d9753ca84a2ddd219d59acf08c84f4db736df98b33bad3fb59ca8a6c70e3d00f131e8

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	bcbd08530b98c9823995f88de508dfda3dd54105a0ca3d4d5fdf5b58ec053f728ce6fef928b54d5a75b198830039f58abad53ba0fe585d72f0b0ceef99812d60
kubernetes-node-linux-arm.tar.gz	5c52d529bc2b343e1d5105c11cf9d8d64357c35aa2856811da710568683a5025610e0401f81e6a8c49890eff7e40969ed55c0cb425112e86ee0df77c8f4a3e00
kubernetes-node-linux-arm64.tar.gz	0334d7fe95fe97f398e0b0b4319ff5b18b32e6b2f1712e2e8d7fb59f262ee4f8814ce663918d69b4b8a78d174756035cccf65dc9906eea59c640afdb6b1ed010
kubernetes-node-linux-ppc64le.tar.gz	3a6c94f95e933e72db54a32e09101fa7a10487fc65c395527333fdc1127832ae73e2e2b319701bf65460cdc68ac1de455d38caafe93153b8cd4a28cc6f6933cb
kubernetes-node-linux-s390x.tar.gz	8fa3c9df91f5b797eef32c50fe2122c0e4bcb25c8cfd5ee6c9a96e6097b60971b890b46078e39f12eff6f415e56dc4c96b31074ad04af3bb04c49598a89a7b6e
kubernetes-node-windows-amd64.tar.gz	81bd3ed9229a1df226344e77f1c2fb09a069cefa36a6b79ae9ead1a6cb3a8aaecbb05daadd4f62ff3fa315116bbddeb2c04afd04c0c48b6fafcd86f592fb0a61

Changelog since v1.15.7

Other notable changes

- Fixed a regression where the kubelet would fail to update the ready status of pods. (#86195, @tedyu)
- Fix nil pointer dereference in azure cloud provider (#85975, @ldx)
- fix: azure disk could not mounted on Standard_DC4s/DC2s instances (#86612, @andyzhangx)
- Filter published OpenAPI schema by making nullable, required fields non-required in order to avoid kubectl to wrongly reject null values. (#85722, @sttts)
- Fixes an issue with kubelet-reported pod status on deleted/recreated pods. (#86320, @liggitt)
- Fixes issue where AAD token obtained by kubectl is incompatible with on-behalf-of flow and oidc. (#86412, @weinong)
  - The audience claim before this fix has "spn:" prefix. After this fix, "spn:" prefix is omitted.
- Fix LoadBalancer rule checking so that no unexpected LoadBalancer updates are made (#85990, @feiskyer)
- cherry pick of #85885: Provider/Azure: Add cache for VMSS. (#86048, @nilo19)

v1.15.7

Documentation

Downloads for v1.15.7

filename	sha512 hash
kubernetes.tar.gz	bb28f98cbb5031cb73952d7ecefafc56f91fcb0266270236f4746d5d1ed14cc0f6605f0564138080cdecd1411dbaaa8a9651fc8e02d5a133b6341b473653f952
kubernetes-src.tar.gz	6feb7d83934131bbaf89beeca90ab3d6c7371e3f504b251caf8fcc68e4b1ef68495345a4c08d5c2a9a18e7eaeab67e54d6cfad3db3c58dbd05192a194e0b8c93

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	e0419273142d4c6ba6a3c1194b7f89bb06602fa15dca1c13985063241c81c16243ab82bfe0946be64a747f5a64dfdec84c39a64af1e3ae20de985e95b0b1c63f
kubernetes-client-darwin-amd64.tar.gz	23abbf86264965379f5f0835c3304cfff0b261952a2e6e5373d2c3c9e61d07f1695ec3817ef0fdb9cefcd8333a3f89edafdc0aa23df4737e72b90c6243f66741
kubernetes-client-linux-386.tar.gz	1b1ac4c29ceb32fdf0ce113b45b0cc28a30b07d2de0835baff234a7be258d17e17443a16c67b9832af5fa843ceaa703bf45002b9717bd7bfb831b6a95d359a4c
kubernetes-client-linux-	d815361bdb3a9e8032b8c5c1e0da81d7dd7645cdb0fef6699cab6b379bee59a522a02d361f353f261734bbcd6982501357633 68a43225f28c7a240bc0e244ef2

amd64.tar.gz	
kubernetes-client-linux-arm.tar.gz	6911ad6f772ec7a702399eb2830c11cead2dec9dd39f10fc544a0c1f13b704cb7d17e41964761dcebcf04c0badf46af4111ebfc399aeef65e117081d4d86713b
kubernetes-client-linux-arm64.tar.gz	82c82040a21d450f487db5e9afc6b4acf7711c6f1a2ac55386f16320f276f4d9c6f0eb0cb5abfcd84b7eb3bef29b4fedaabd34406ebe51ffadd7a2e623d94170
kubernetes-client-linux-ppc64le.tar.gz	2a26af462a295f67af03364fb60d7e97077f54bc69fe7dc494a90553a8d32288e989f3e7356ef9164b547178767491b8c7d5bbf2a62349548f6c4eade27c6e0f
kubernetes-client-linux-s390x.tar.gz	ca2e8c09b61051d372fbe7701fc5326ca7bf69b7aaf338b38544ab12fe8be07c48f768c6ef10d2370f5d6ba613f7cf672faca98e2ef6055f1ec568661ac35dd1
kubernetes-client-windows-386.tar.gz	f12dc441a8a3213d2239c10ff572daf18f35db6a16f9974e13bdaa10c5c60a9581f425012d44cea5104c32df1758c3c4b8348f52c12237267879d74f0a017f76
kubernetes-client-windows-amd64.tar.gz	12b98ac3fcc850f0e9ee6d78245c33c4d021d2a0565e2479efb42c0b767e9215299fefd8d6cfe28a08a2c045d3436748e745ffa7def4c07b7dc0e46949a62246

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	1f3fabaabfcee57a083a99ca8a31bd2246db912f3ffd7800166ffa59999b45eba56e958d0960f38779a9c8b73417406e0688b48aa9933c838367c1aabbe14893
kubernetes-server-linux-arm.tar.gz	53286d3c6b47622aa8235f96f59cad9005cef9550b13aa3a6f718512dc8da76ba2282c91f879d8b4d6cef5c84aaf133c7bfdf0c8020d50fc169c42b397c2e870
kubernetes-server-linux-arm64.tar.gz	b4b8f81bb84c29c658255ba9eb1fdd281f8911efe1b6dd698f9dbe46ca90786c76607560fbaba233eeb3efde4ad605fbc8e26d3a51b7c48a33e68ecdd59116e9
kubernetes-server-linux-ppc64le.tar.gz	5f063a48215aede437eb267eb5d95f47a388195d3f5ff2a5f80cffb8e038a814559bdb16b0ac6b63b007fd3d1f7197b11c8c5136f645ff394e8fe1bbae0c70f2
kubernetes-server-linux-s390x.tar.gz	fbf090cd77da53d1441c0ebcce508f3e233eb83936e6690f06a786969c164bae661d8bad209081d48834b86863a2fb3600890f604c838d1d1bf35a2421a65671

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	3be351060e6f9bd1a6a35fd3194f34a43204e942bab304b7a4f8b987dc573e6f067cf4b723d6052ab382c16129ed34daf4d17b73be3a46761ef28c536bf93a3b
kubernetes-node-linux-arm.tar.gz	39c562d303d3570312170bf1257c74fe42ffae67bbb38b582d36e44b4b1832e2ae5e580030470ecacd612ed757a514e870dce59219b36bf9e196e16aa7ab984e
kubernetes-node-linux-arm64.tar.gz	062e0798974cad1604a9abcfdc1acfbe6bb4bfaac02e0b266bc688cbf985c79e6f2bbda0517e2085273ce565dd6850326b53e4fba3dd972d6620f417d78645ee
kubernetes-node-linux-ppc64le.tar.gz	a12b77f963e1f21ae8a807b2543ea464d05989cdbea9311abeaeb74b49fd91bfcf7fed7c4cf135f49568630eebd94f01069b0f8d2b6a839fb2a290f36686d618
kubernetes-node-linux-s390x.tar.gz	4bb6efaebaaff971b913660681cd22ad3d1b40aa63f192e34eca58e39b3e60f92070cf2d1a19806c07dd0eab1423e81bf975f50d100f18fbf8e05514017fc4d5
kubernetes-node-windows-amd64.tar.gz	79079d90bd78c005a497ee9714780a295e145f6a1c0a3ed2c59f8155aa677902b0920fb7f19288bbb09c213a97afe3944bb0871e7d6f7637cd558da4b9982f88

Changelog since v1.15.6

Other notable changes

- Change GCP ILB firewall names to contain the "k8s-fw-" prefix like the rest of the firewall rules. This is needed for consistency and also for other components to identify the firewall rule as k8s/service-controller managed. (#84622, @prameshj)
- azure: update disk lock logic per vm during attach/detach to allow concurrent updates for different nodes. (#85115, @aramase)
- Ensure health probes are created for local traffic policy UDP services on Azure (#85327, @nilo19)
- fix vmss dirty cache issue in disk attach/detach on vmss node (#85158, @andyzhangx)
- fix race condition when attach/delete azure disk in same time (#84917, @andyzhangx)
- fix azure load balancer update dns label issue (#85318, @nilo19)

v1.15.6

Documentation

Downloads for v1.15.6

filename	sha512 hash
kubernetes.tar.gz	ef796ccc8146a516802fff3c7bd119939c99d3b577a43fba1f11c9bdf348f75664afa768d66923f56da8e00f35d0cc055861a7204383d1416afea1511a7365a8

kubernetes-src.tar.gz	db1a2c886fe467ce87b2b06335c7012aa20913d08b8484c2220278dbd822c2a6522f13e4e52053f0a9741261a90ba14e40d0eb00b42db5ec32e5411d97659980

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	bef653803ad4db495473addc62800cf2fe4de9a03eb73fb0a1fcde8c31c41b5d5b3f3433de92379c323f752c29926ca59bdc9b028d864cf7b994f09d6860b83b
kubernetes-client-darwin-amd64.tar.gz	42a63e2cc626fbe30de7ce118afa9b0bcb58d85f7dc909eec8afc4a331a09db3d6bc8e80932f590214facb5de1089087a31c75c3001bcf433a3a42a4e7549b74
kubernetes-client-linux-386.tar.gz	a0ddf21c66033dc5a76a3eae46beffe3d91c89635a59c90af24b87a9b57bf72d146dac90e500ad908dfae307ceb241ba26d6a28349d8960473e52e29ebfe9730
kubernetes-client-linux-amd64.tar.gz	32292b73d40c01a55e9d820c8a2d69f7ae68efd86954eb25a824bc4730146fe174d5a0ea9eb4bc914f9e725a59f8aab411138cb09ec87e1cec130dd16eb46273
kubernetes-client-linux-arm.tar.gz	a5ce6a8613b432b87c08685a92ab14e1b62a8c296603bf2d6a40a330a74c6e7a816078f02577f15ecfb1fe4442ff6ed093447226fdf56d6e4bcdf2efe21afcba
kubernetes-client-linux-arm64.tar.gz	337c2bdc9a4fdf2335fbf71a6e588c75e67a68f901f6b2b77249f67336f4db710f4d88a1793a769f6c15b858a0f82857176a09a5d5e5bacfcc79f0a03a36d31e
kubernetes-client-linux-ppc64le.tar.gz	e5dd9a8fdb59f1901dd1da2527105788e511b443a669cf9a7a35d9064eb7c3156c927f848819e07d21a486acabae39722aef533d7f16be02c843a8317722703b
kubernetes-client-linux-s390x.tar.gz	685a6c8b86d79c49fe547d78b437de61610006f270667a45d7b3702575e71a16c397513df6f2849865fa0054df45795159eacc15b515f4fe69c64df91f09744f
kubernetes-client-windows-386.tar.gz	55a4f3d344b672250b72f8b8ea25a12196b246d641db6ddb7e89d53f3cdf812498fb6f613a02111e6e309894f234c8a84e380ac5bf771a93017475a57fb3211d
kubernetes-client-windows-amd64.tar.gz	7ebd7307d0f261822a74dcbda7183382f86210a6dc32914fdf2b0391c08d8eae4fa69187b167a092f11630466eb0a2f6b725b7036d7b1d08a27548768eaeb805

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	3fcbc3ec6ca882e7e7f3a5b4cb0b3179efc9c043ff719e5023fef5221b12190ba1512c83fbf614023aaba3399ddcf0e513b24dca83132596cdc655a1b8d7e78c
kubernetes-server-linux-arm.tar.gz	17c9fca684cd620bd9846c61cdc608e26cb0986a0c6bb31d54105d50edb9b8dd4a90aa0871060b6386ceb330bf0c3baf5fc3ed7c3527c93218aab979cf44dbb4
kubernetes-server-linux-arm64.tar.gz	398d0ded499f6028ec7e1d891f0e2d0968f4cd8e31ec403e1757b4ec14dd699a008b5490ef1fbe40ac48eaacdc2a01af33fbf67f47f9bf1659bfdc39427829e9
kubernetes-server-linux-ppc64le.tar.gz	ed81cec528e6e181c38768b188ddb636aad9da9e5086b43435979764a50071e538312053a267fcd014a575c1750848ee4bdd73c652cc5a66a627ffe742d43ceb
kubernetes-server-linux-s390x.tar.gz	3f4f768c68181960d6127d6225fd19bbbbb84d95441c0698d389528e88f38fe937727cd9b3ae2d173fd497b975ed526f9c6477201081843f6897bb45b4f0d029

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	f2a951a28bde4e2d04cbc654cca9672223670fba7ca12ca457cd1ad0a50ad7e36c65668fb165c0dbb1a7556c051f10ad97acb2627ac0213b1f5ab5e1f72a4147
kubernetes-node-linux-arm.tar.gz	1de988d7d0afa9878eb5a84c7bbeaf8051e982ba4ea5353074a9ba42d5a15ac0449770b245d0a64ec506af825d3cf7679a0043660076ab5931dfe70789219607
kubernetes-node-linux-arm64.tar.gz	1a8e945c50593fac840a83a3961e623a1a7d6e440a71136f541de1c56b7e8c425f9dd4f5a0fb019e607dafab0a43d6d47f694afe27f5e73dc1d6376a07485f83
kubernetes-node-linux-ppc64le.tar.gz	5f2c16e5832f8b8de611850d540b994744dfb88e7e0b94247f6a9af14c0cd4a4f75464625a9015da11fd9ea1537f48c35e36a784a4ace8d1a675e10fd1eb89a9
kubernetes-node-linux-s390x.tar.gz	cd7d6ede713b30fcabc6faf9b4dd52a56abf6aff03990dffdf91ad3866644d758fb9b296a0cc89b421a53834d580dc4a65b3adee2184b583ec311e2b401d4f3a
kubernetes-node-windows-amd64.tar.gz	023cd1ffbf941c0fffc5710bb7f9b9ac72b1f37d2440f3c5d418580430f566c086e8a5776275500a0beb8831f71fc8e54fb026f62951465fa94c01ce4f8bc6ef

Changelog since v1.15.5

Other notable changes

- Fix kubelet metrics gathering on non-English Windows hosts (#84156, @wawa0210)
- kube-apiserver: Fixed a regression accepting patch requests > 1MB (#84963, @liggitt)

- kube-apiserver: fixed a bug that could cause a goroutine leak if the apiserver encountered an encoding error serving a watch to a websocket watcher (#84693, @tedyu)
- azure: Add allow unsafe read from cache (#83685, @aramase)
- Adds a metric apiserver_request_error_total to kube-apiserver. This metric tallies the number of request_errors encountered by verb, group, version, resource, subresource, scope, component, and code. (#84777, @RainbowMango)
- Add data cache flushing during unmount device for GCE-PD driver in Windows Server. (#83591, @jingxu97)
- fix: make azure disk URI as case insensitive (#79020, @andyzhangx)
- Fixed an issue with informers missing an `Added` event if a recently deleted object was immediately recreated at the same time the informer dropped a watch and relisted. (#83911, @matte21)
- Fixed binding of block PersistentVolumes / PersistentVolumeClaims when BlockVolume feature is off. (#84049, @jsafrane)
- CSI detach timeout increased from 10 seconds to 2 minutes (#84321, @cduchesne)
- Update to use go1.12.12 (#84064, @cblecker)
- Fix handling tombstones in pod-disruption-budged controller. (#83951, @zouyee)

v1.15.5

Documentation

Downloads for v1.15.5

filename	sha512 hash
kubernetes.tar.gz	7b887b5c134fd865b5c0f805c4632cce2dcdf31708c226c1c70754703c86bcfd14936d9d94b9fd9578cbf41775539fdbba956ea85b40d7ad85ac2e455a0a064b
kubernetes-src.tar.gz	b5e7f4feed29436432be1d6b7c65070fcb71cb067263bd21189085c1b2d7e89f5b436e14895c07c7054539cfcccb5164ece78943182fa17a41968c07deb047b2

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	5fd269a04ac6931c9787e59b4496fce37a78a9e7fb373a10512f6f9c2787048c0bc932e51c7721742afb8528960b592fc85c704127015f46c76f65165cfce717
kubernetes-client-darwin-amd64.tar.gz	3c3e06baf0d21dc50490f498d0f3423e72d3b776908bad6267c9810ac70692ebec80a6f4e420a961ca237cb75bfc8f0e944cdd1088542307da7f2bf81c8cccd7
kubernetes-client-linux-386.tar.gz	4c8ac716cf142c64b85c322e7bf9553a7c765aa6b767c2a031b10981fb1e3c2102c9941d544cd56b97401d3e41766e2e34d3f723378e849917505430f57b0020
kubernetes-client-linux-amd64.tar.gz	e4625877773345695e3d2e2faba53d0bf4a57ab6fe5ae69e5f253fe8529247d05d36d2b8ea6cf5f60dd9c805e29f8385cd42b25d79576248544f26511dc98626b
kubernetes-client-linux-arm.tar.gz	abfe254507f521d5e46c61300409dee1014000a24f2e2449aef80359176b1a9e33e8d64a0204f5865a60654385b076de8b3a877fd598ffeb2ee7ffea012c3309
kubernetes-client-linux-arm64.tar.gz	df3c40eea79393a39c78a907dfd8b0e1bb2132a3a15b05756c948db69a73542d45dff6d47a60712c074478401536fe7b9c31356def104d27ad96b9a5fbb6adc6
kubernetes-client-linux-ppc64le.tar.gz	cd80c98a7d8233982580e92d3005cb96b5c7db16d488432002cb6cfd423835bd8f50e1ca837fbfc57509cacb1adc16eb23e1f11bded598e65aff0fb0cd7157f8
kubernetes-client-linux-s390x.tar.gz	9a2c8ed471e064d3fa3c078f53cffb45dfb220d0913449fb3811fe31a8aa938d87f516fa4f9c9f3e88a1780ee0ac5932954ed3159cbd7f5c31230d7f29c04a00
kubernetes-client-windows-386.tar.gz	222ee8635eeebc7369c249e1e6fb68a676aba85a4ef2e0a7ebfbf53fb588f14a5f8f5273fe30c542d0c04c42ea983839617dde4ba4f4d1282d736376f1c78cd3
kubernetes-client-windows-amd64.tar.gz	25fb582717855b90d0e346413ea919e6b58b22930455542a77029a0ac1abaef38558584357c5c0ecd882e44bba9afa5e9838b112d2b56a8987dd2fdcb671dc3a

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	2b2cb8393aa321ca6d522fe0770d8e3ccae33d44f0e4f62702dfbc9bcc54314dfdebc05297fb71932424f2d02c186ee644b91bce1a6f7abf7131e68cffdadfdb
kubernetes-server-linux-arm.tar.gz	c8a75b43ed8c5262adf965a611310f0164cfa05d856e887397e2fcf8fe3fe4a2c894fa776002cf2c27b92901425aa960a09556180c9a2a75a3f1866bff360423
kubernetes-server-linux-arm64.tar.gz	9c3618f36b965793106c61d0ffba4e75013b606795d445c2f28769e71ccf0db25432bb705da8bc48c8e30f5977cfd50888bd1bab1a605aef14c77e603d251496
kubernetes-server-linux-ppc64le.tar.gz	c2a05ac20eb19ee659fa151c044860034f715c0949c3f453c76a47a2a20583035c1340c6977e20bfe7318c37e67c045c74dc434bd9f3787012eb628f700da66f
kubernetes-server-linux-s390x.tar.gz	27816977520f1350421d9a8f091eb6491fe7057a97ec53e67f293d1c3f95074eacec63b8aa61258bed7603759ea579aea832e0a7ac4bb7ebca754d9f9616174d

Node Binaries

filename	sha512 hash

kubernetes-node-linux-amd64.tar.gz	1067b5037cd242c9a184237efefa0cd940fb77240fd3025bf44337a609d14f92481f98c6c75f36ddd632349c1e125d51078aef1f3d1f38ca5190da56e6c7d3ff
kubernetes-node-linux-arm.tar.gz	9941e468249996be1ef363f16ebd546c087617ac2adba16dc99f94c5417cdc0e2ba36f4767d0affd66a8d2228ad855183b6100dec4672ba32543d697381b0c0a
kubernetes-node-linux-arm64.tar.gz	d4f4e19fbc10873e3731f1eade9457aebe782d3076464bade444757480be491c90746dddb4ecb5aedbbf88542ad70c06247b72b3c541be74f00bbdf265fdd54a
kubernetes-node-linux-ppc64le.tar.gz	5f44f0ce888d170b883f5b8de8a2875d17e7a380053d3281f03736c7edbf625b0761969fefcc8b35f3c3fed4cdba8e31f0836179f5dd383f371ecbbae8bb1aaa
kubernetes-node-linux-s390x.tar.gz	117e0f97c65ba9fd9657b0a174ee090b07ada2db9448d9f319f8128d6734adcb0ab24cff22ddcb822a396c17a62d6a5b497bbbf670fde4e31483e5d5663cc9f1
kubernetes-node-windows-amd64.tar.gz	cbed2e03cc6949962009794ef553df7e14476dccbadbe41d838db5da4de0394997980c9e8729f20f126c3e7124c918ad5e916c00adf74aebbd7744575a59b0e4

Changelog since v1.15.4

Other notable changes

- Fixes kube-proxy bug accessing self nodeip:port on windows (#83027, @liggitt)
- Fixed panic when accessing CustomResources of a CRD with x-kubernetes-int-or-string. (#83790, @sttts)
- Update Azure load balancer to prevent orphaned public IP addresses (#82890, @chewong)
- Update Cluster Autoscaler to 1.15.2 (https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.15.2) (#82831, @krzysztof-jastrzebski)
- Fixes a goroutine leak in kube-apiserver when a request times out. (#83333, @lavalamp)
- Fix aggressive VM calls for Azure VMSS (#83102, @feiskyer)
- Fixes a flaw (CVE-2019-11253) in json/yaml decoding where large or malformed documents could consume excessive server resources. Request bodies for normal API requests (create/delete/update/patch operations of regular resources) are now limited to 3MB. (#83261, @liggitt)
- Update to go 1.12.10 (#83139, @cblecker)
- Resolves bottleneck in internal API server communication that can cause increased goroutines and degrade API Server performance (#80465, @answer1991)
- fix: azure disk detach failure if node not exists (#82640, @andyzhangx)
- Fix the dns suffix search list for GCE window clusters. (#82314, @lzang)

v1.15.4

Documentation

Downloads for v1.15.4

filename	sha512 hash
kubernetes.tar.gz	c882035a4936764d0b2416c30027f0a3be826a26a399739dc52646b1cdb3303db645380b1ad02d610aca744f28fb899b55dfdbdebcd364029f87620b50dd721d
kubernetes-src.tar.gz	829cc4d193e790f42d2e828585c5bcc2e945bf1ce47c105da12b072e01ad38ba2b5ed9996cb61a99e88ae8a90c3ba493104b3a2c9469c239fdf7003661c8289d

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	fe56031d4647b51fb44811b0823f06eaa48662a95d009db5f775c4d307438ac6e36463114e1a8f507949eac018c5395e2a19a6436616012b3a780dc97f248eaf
kubernetes-client-darwin-amd64.tar.gz	a9e0fa063e5461a59f0bdeb35e39497bddb11b32b13d7e759cadb9b186b788b58c53eb155973676069c75b7fa8a6952b645efc87fc9f9db7d03dabf6b57f4b43
kubernetes-client-linux-386.tar.gz	d13308032cf7b5a16765af01a50f97ffd6c15451bee0a6c8bad189998fcfe8a31fb348a125046dec5c19f4bf3f44cdb6ce8b5a01a094a8e770c825a351e8030b
kubernetes-client-linux-amd64.tar.gz	5e4a94e161e60b0ff73658576c64ffde17261f9fadbc9588b9791bc248715f6a298f0658a63611ac0bcc1f788ce6691e5bea1b64f9f853e746ee01a891ae5f5f
kubernetes-client-linux-arm.tar.gz	7ca4da92a0132ed917d02c0f91069499a13b43a969168b5bad0be58a7de4486eb495d67eacb8ac75bf1817434bc4e3bd7ea31c1dbf7d2ea6acacffbea63bcc81
kubernetes-client-linux-arm64.tar.gz	a0d063f35a906274dd6eca7beb19f7e151292d91ee49543b73bd29069dae48a29acb8ec3fd8a53159f4f15e3ae267c9e9aeddfbfc30f1e1fed138e8ae82ce7dd
kubernetes-client-linux-ppc64le.tar.gz	60d455d89cc96dadf932207f37ff418b750f3e2a708b25f4bea0bc9b663fc467a33a4360958d8b5d7dc73039c8ed68d0b7c7b92d473729ac07c72c87519c60bb
kubernetes-client-linux-s390x.tar.gz	f2b41735ea308b351c11335395e2f3ec94fbd3e1af9da879ffbe7c713cbe71f3e77152b24696ad4649498fcf4f2bb6ec4eb8ebcda4db06a66c4f8d4686110702
kubernetes-client-windows-386.tar.gz	b557ac04721426d4b81a661e249baeb2e3190ed9a99a9c21bf1bb76a3d12694ad397789680a92077b716f1bbcce6242c8947ae4f97f7272e6e3200965d311a6c
kubernetes-client-windows-amd64.tar.gz	d4fb6cdd738c36a5bbab6dfa32fd231411a5a2388747a8be8d0a4da37b39b6ac0acff71f89a891f27c22976559da78e530ee6ed075ce8a1ad1def232834f8624

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	8535926b955a1e8dc42509850c92230e75a671c9a86abfbbe8ce3334cf6fcb9f41d66c16311b549a4a6c267471f1cdebdb214c88f4947bebc22e28ef2de08413
kubernetes-server-linux-arm.tar.gz	2405c211e938ca4f16cc1f74d764b8775d5d6bf7803c3d61f5eb551210712c729f811cc58ac31808b01adec744a0453ee52bee39fff0b006550bfc2b4d608fd2
kubernetes-server-linux-arm64.tar.gz	c5c532062a4aa4a775e19417f3bfc641154720df693b7f2f448d74dc7dee39c187303479628a45f3b6adcb9a868687fee2de39936912e6be11e114b1538cfd24
kubernetes-server-linux-ppc64le.tar.gz	3268e74365835fab3c1dd62684a85461c83bda04e0009bd57c994b0985d01991f43ef1bf47112a297c7f3d943c839c1116b3732a7636a50ac24dd35f98e27ef4
kubernetes-server-linux-s390x.tar.gz	ff4a984698d8a3811302aed9f22bcef33d2e713f602c845bf37ea0c29d29a75e75bb4b3bbc2ca79f13a747fc26bf8b25370cbf071b908b7881d568fd48313c10

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	a505862c2a55dcffa48297c156cebe7a23d459b9f75bd37ffe02e35f0a3d343963dca398f68d0b4f8caa9e6b4da64dd86e088b4018a0af2598f5d8db7ef5c5de
kubernetes-node-linux-arm.tar.gz	0f7046eaa400aebcc068507a4a9658b39a78aca4c3394498012e9de565cf5e27338066052811d26bb859b181fb155f030d2d5ef54cf46360ac2443076d672b06
kubernetes-node-linux-arm64.tar.gz	2af0516a43625d753d97964d056ceeacc6499f3848f8593ed7030e10625b7a9fb6b392c28f66fd3558d96f4dfad67d48986736775fef286d2a586ac28adc7a74
kubernetes-node-linux-ppc64le.tar.gz	66ab2b8f1c74f2369593bc9cd68496b8d84be1ea3393146b09c6d78088a0d19542242a88fdced11de1ecefab2922b7f565c4dbe51cc42385404c0cb6d9d22167
kubernetes-node-linux-s390x.tar.gz	e34db3069b38d6a984a998c1af763c2658ce74e025ac4a88b6218f4aaab49b300b67f6e846571d5ece31c76cec0915ff459041be570717a04048265b36e84a3b
kubernetes-node-windows-amd64.tar.gz	cbc0141b474e53fa7dbe453813f414f32def24c4f9cdadc6ad9438371d85b31cde01c5f17edd6798e7ea2d6e408638139b02eb41b365b05bde2714b2cf9eac30

Changelog since v1.15.3

Other notable changes

- Restores compatibility with kubectl client-side validation when structural schemas are present in a CRD which sets spec.preserveUnknownFields=true (#82666, @liggitt)
- Fix a bug in apiserver that could cause a valid update request to be rejected with a precondition check failure. (#82303, @roycaihw)
- openapi now advertises correctly supported patch types for custom resources (#81515, @liggitt)
- kubectl cp now safely allows unpacking of symlinks that may point outside the destination directory (#82384, @tallclair)
- fix azure disk naming matching issue due to case sensitive comparison (#81720, @andyzhangx)
- Fix `kubectl logs -f` for windows server containers. (#81747, @Random-Liu)
- Fix VMSS LoadBalancer backend pools so that the network won't be broken when instances are upgraded to latest model (#81411, @nilo19)
- fix: detach azure disk issue using dangling error (#81266, @andyzhangx)
- Fixed a bug in the CSI metrics that does not return not supported error when a CSI driver does not support metrics. (#79851, @jparklab)
- Fix a bug in server printer that could cause kube-apiserver to panic. (#79349, @roycaihw)
- Fix a bug in the IPVS proxier where virtual servers are not cleaned up even though the corresponding Service object was deleted. (#80942, @gongguan)
- remove iSCSI volume storage cleartext secrets in logs (#81215, @zouyee)

v1.15.3

Documentation

Downloads for v1.15.3

filename	sha512 hash
kubernetes.tar.gz	dd9f121bd8c6eadf004b9720d72c338e4d0711bd48ee5763e5f26c576c0743e993c76a13aac3bce69336cb071c9d8461213b0a4f3ccd62dec32f2051e12ff81e
kubernetes-src.tar.gz	2f2a304c11e2aaf68e339c970ebd919fa1ce5913e3a6f47ac51be080de9300a7cd91267e637b4fa6cbd945d0de6d4263badb06a6bb3160dc03cd422b0a818963

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	04c08da4d25b8a7b80e0211050928458d7bae9d721f96353a886332d60db0aca7350dafb0021124c2d8186313207e32ed07dcc3c8a28065774b5d45a2db4466c
kubernetes-client-darwin-amd64.tar.gz	d340c797d6a49c7034046a7004285d29066c11ac77fc492651849d101e5e57bb406fbc77b937dea873fc839d134577c719d85c49fac352c3134fc9d149b630f0

kubernetes-client-linux-386.tar.gz	16b00092144f04b75b7c7d5b7e9dc1ba5b8038ba68b0ef2edb17e508d87a7e78b876ac7aafd15eb3c5d854d8440dec0d8f5cc9618fe07fc8af5ce0d920d6bda6
kubernetes-client-linux-amd64.tar.gz	93049dcadbe401fc2ed2f53ace598aa4bd183142ec2b7451d2a53e61c4bbc64f393639df166853cbf62c361839f87a386015c0be6b1a9a4d3c9fa84564d376ef
kubernetes-client-linux-arm.tar.gz	6798e066a13ca70bae62540f7387ad803f2431c67b6e0d1d9f21233b5ca045c9a082090e743fb7d26653fb8109a5df3c5b38e607bf005617cee7b1b1bd8089e1
kubernetes-client-linux-arm64.tar.gz	edda1fd33dc78c3557a146c3976d19b88082ea86bdd3f0de6f63c8dec899d6fe7207335edc4ed3b9d123af495fbe019702dfbbc34b0d6f9562330e3968049591
kubernetes-client-linux-ppc64le.tar.gz	8fd023b0c546eca42a53ead1c246d093f9303ac22baf34b6b9910d6d146fdea5742a74fb09bc145d0caeaafb306e92a3ce18f756d7f2d713cdceba28ebf06aa0
kubernetes-client-linux-s390x.tar.gz	fd15210ef272e65e25e64d9fc0dc62780cb69fc6a6063062d0f3d5e9ed89b46f039fc30d9df3e216ec73df39b96966ab86d1fb52acac606bf8763803878b6289
kubernetes-client-windows-386.tar.gz	3688147e3ace45f3e0f5227867dea59ebd3f33e9a973f015257b79aec02bdbc045a355b4ee398ba061fa160ca128701bcdb89f0ade19d6b169ef45ad8c0eccc0
kubernetes-client-windows-amd64.tar.gz	78f42ce023bef618cb116f713f0f9e5b2ff8402c2e4ce3ab306a598b642ffa0a9f615db46c42e4a86d96ec84f1001f222c7896746338287f62730062979cf38d

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	33f048c350fa0e92857cf8ff61ac7971ad263eb5d4976bd7a2dbe303b6a523948d2a2f9da085d44375d860cdffe1c3e10030e1a9467b9269a23dd7ffa5c8cf83
kubernetes-server-linux-arm.tar.gz	acce3e4902dc26c799915cfc607f47a40106982fb2ec2f6b7eed54df30b0cfa74b1f5bbcf3c3d0dfe9d45c0ea2ff86f4d35463b2c1a1c833436005004d674bbe
kubernetes-server-linux-arm64.tar.gz	2ea339786c9cc452fa429584715d3034d9a65379f30e467a349f865b2533d26317051aabb590318d5586c803c14ced533e2aaf28f260fab73d83697540f7f91d
kubernetes-server-linux-ppc64le.tar.gz	cd64d5331d41213d4101885b6ad6a22438a025c9f752db4333b5728e85d4b50a15a15962c6a4ec0011b38e542dbdb2ea5874db92330d12fb545021ad64e08094
kubernetes-server-linux-s390x.tar.gz	0d028067e32a6532c7377010031bc0d166d24bde0f1bd04c53beb3f8272e872b6d142dd7e9d63f3e088f90266e58eca8fc8bf54f7cdd86e442633a4098d497e3

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	77d7031a5d9f3e4ba5aa66b011982152898b68cc97eca1e9b6f6f5dad4e722ba41e33d66136226c5a7e9c54e5e71257ab3fd8f9ca2233ad616fd5e7ca84052d2
kubernetes-node-linux-arm.tar.gz	d94894a86051c63e5d5c768059c9a1ce88bed6105222e498110dac7980d0ffd92b6821ff8c79e4388dd31f9b5aae03178889da016561541aa5cd672beff4e7e9
kubernetes-node-linux-arm64.tar.gz	9d79049451b2dc3030a1edb62ea826b05a78dad2ffbe9623fe1a8bf235bb29102f0cae133443c95166fcde6469433d814c32379a7b15679843903d1fe165063c
kubernetes-node-linux-ppc64le.tar.gz	c8cad37ce2f67415bbd21bec8e019ef0bb790ebd083d67f62066643d4a5af3670d765322bce01af7d44d18d804a5f729180565886fd65d86562c2dc1df208387
kubernetes-node-linux-s390x.tar.gz	a8a1bde2451de413a429c15693299525eda1057b1d879899f4f02b6b46af5580b3f20b0afefa3a4661d5a633feaf945a7e076826c844257a87a0898ab9ff4f02
kubernetes-node-windows-amd64.tar.gz	6010f63e040a6b8f8a8047a4c4a2e1b293ac3a514f2cf3202d494985e9fe0fb8951ad36d29e32337bac4fe68813621c8bee8306f9d7b66b014c64eb714562104

Changelog since v1.15.2

Other notable changes

- Update golang/x/net dependency to bring in fixes for CVE-2019-9512, CVE-2019-9514 (#81522, @cblecker)
- Update to use go 1.12.8 (#81390, @cblecker)
- Update to use go 1.12.9 (#81489, @BenTheElder)
- cpuUsageNanoCores is now reported in the Kubelet summary API on Windows nodes (#80176, @liyanhui1228)
- API: the metadata.selfLink field is deprecated in individual and list objects. It will no longer be returned starting in v1.20, and the field will be removed entirely in v1.21. (#80978, @wojtek-t)
- Fix Azure client requests stuck issues on http.StatusTooManyRequests (HTTP Code 429). (#81279, @feiskyer)
- Update the GCE windows node image to include hot fixes since July. (#81233, @YangLu1031)
- switch to VM Update call in attach/detach disk operation, original CreateOrUpdate call may lead to orphaned VMs or blocked resources (#81208, @andyzhangx)
- Fix conflicted cache when the requests are canceled by other Azure operations. (#81282, @feiskyer)
- update to use go 1.12.7 (#80134, @tao12345666333)
- Fix public IP not found issues for VMSS nodes (#80703, @feiskyer)
- Fixes validation of VolumeAttachment API objects created with inline volume sources. (#80945, @tedyu)
- Fix kubelet errors in AArch64 with huge page sizes smaller than 1MiB (#78495, @odinuge)

- kube-addon-manager has been updated to v9.0.2 to fix a bug in leader election (https://github.com/kubernetes/kubernetes/pull/80575) (#80861, @mborsz)
- Fix a bug that ListOptions.AllowWatchBookmarks wasn't propagating correctly in kube-apiserver. (#80157, @wojtek-t)
- Pass-through volume MountOptions to global mount (NodeStageVolume) on the node for CSI (#80191, @davidz627)
- Fix error in `kubeadm join --discovery-file` when using discovery files with embedded credentials (#80675, @fabriziopandini)
- make node lease renew interval more heuristic based on node-status-update-frequency in kubelet (#80173, @gaorong)
- Bugfix: csi plugin supporting raw block that does not need attach mounted failed (#79920, @cwdsuzhou)
- Reduces GCE PD Node Attach Limits by 1 since the node boot disk is considered an attachable disk (#80923, @davidz627)

v1.15.2

Documentation

Downloads for v1.15.2

filename	sha512 hash
kubernetes.tar.gz	0c8b0614236666c1025551bc0fc239b412348998352458ab94a63e67bcb0357a1b04355ddd23a1587ede931d109fb4132b3e73204f523d238b0e20e2e488d6aa
kubernetes-src.tar.gz	2aa692bedd5f68e41c51025f9f5824e2ad494fd079bfc2901f3c6e4c3434137a27f4b7305fec424bdb27c2f14f376305060c2799707541e1ec5c32a97c50a2a6

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	fff381fc2708f8ef47607e146942af09daecea1f36a1856e34669c158efd9af4e24e9fe83368355fa1d68be1cdf16c3d458cb3def84454d4477d1191da1e8bb6
kubernetes-client-darwin-amd64.tar.gz	655bddb7749c10c5c15004879d31cb129d051245cdc0d098d7a8ee100b8e01ceff996721b97ffac7805f533e38b494b736501e75cd6578f9a9008790ffaa769f
kubernetes-client-linux-386.tar.gz	a527dd9ee0487060eff7dcece01e8e2bb59cf5687192583234108841 00d7e5bc5bec910e792c6a71d61228e4c35fd99117b2ac0bc3c70874a60050e3f1cd6e7d
kubernetes-client-linux-amd64.tar.gz	8a5f25e74a317169687abd65c499fc4f7cc2ff0824a7a9830acd38bfeec9923d8a0d653c3b1eec147c44a853ceeaa62bbb741f17e69b4df614008e53a2fe5b08
kubernetes-client-linux-arm.tar.gz	57bed3825c618309efffff69119d39a8e51827da0f39a40778d174ba2c3cf9410fa05449cd617b79fd681de3fc236cd23f14b00fd771e97098d51b8483bf716d1
kubernetes-client-linux-arm64.tar.gz	45fcdc5deffd958320ade3f69d15937c64d4bee88dd25d11947b8a74c012c786915d2bcb3cc75060be83a5405fa1dc04fd1640246f77014d4e7885f751b72024
kubernetes-client-linux-ppc64le.tar.gz	a7e0b68ec91902896540ce715cee9ed88237870c32582593725f8c42e31308a73da3224a941d457bf728b2cd015a0011e91491b834861cd57e3a28a17b2c0b7c
kubernetes-client-linux-s390x.tar.gz	f0182c00864eb6bd3c878c2910b4fecf321241cd943c8cf56545e2d65f7ad74201b6b5733b70a20266d47cae9e07cbf9baac4e8a717140c5731e11b64e10ec13
kubernetes-client-windows-386.tar.gz	b23f31c300bdac3dcee745e2ea4aaea8ba15128f4a0b7690c07353165776093a3471be970cc23d6ee08a7bd47e2c8b857eb1ec0ed782a338c2cf662d18d77dd4
kubernetes-client-windows-amd64.tar.gz	0833e95864c562a1a5a7bd3d6f1005251e21a24e03483bbba1c4ae96c2c4470d65649fef422b819fa6d644df34df764590642f20d8994f182b990ba79f904f12

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	faa734636ca18ae8786552eab317c0288cf958525df9236ce9b734d5b13809c002bb1538763bc0f8cbb2efa4340152f2cc78630e6158ed7edee163ac53570e22
kubernetes-server-linux-arm.tar.gz	bd539e5789eef3123c62c368b4733b5a1eb23e651b8d1a93bf3fba00fc5f0e9f8648865086f0a27271027fd3f13dc7c58da8d9336e62788380f1da23596bf8f9
kubernetes-server-linux-arm64.tar.gz	05267d81e27dc7508e315b4b815d5c4c879729b5e60db9e5c9fa0f19f3b7518f0f31ad85a1d50af1ba3fdf0532346a6cfbdc9f7fb0b1d98337a4f285cbda078d
kubernetes-server-linux-ppc64le.tar.gz	709a9fc6ec1ee0b8b35bfc84bff1084aab83264140d1cce2e264bbcf003001494acf2275ea7ff41fc0c5a2a012abd3a5229193b00d63ced947a238998fb8f7a2
kubernetes-server-linux-s390x.tar.gz	6efefb71811db1a992d87336b05094362f52b7bc978b506a7cd432e8a3ccda465258f4b9c6399282883dc1192784ad993c47179712da85d556f4bc9f51c84905

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	ad85793c65b8a520090594bf4a0dd4992ae824d24b5968a40b0bf98cbf86624765e08afaddc906e67e14040014336b84bea2052317a23271f8a7230802266e98
kubernetes-node-linux-arm.tar.gz	d6ea163d4afdf0184100f048bc517f3d0705e3aeb763ff8decfb0e8be518daac9c2fcc5644fd09f72129b9ab1dd0b4763bae2d7cc5d8d0a4b1e358cd0a64d221

kubernetes-node-linux-arm64.tar.gz	a1e9fe0a8033191b432c22a401d01c5c5d516efeff1958ce7e520228a92bd35309cc1aa7d752d8d74a00ed879c8c6dbb782f64e99ae70151effa36eb32a442d8
kubernetes-node-linux-ppc64le.tar.gz	1f4dcc0e9aa13c8fe43f821e54c380f8f91765f1d2987be8eded6d2d2f7b678c2b28206b73c0282afe72d97320e3efc91c15c76145673c9ff91652c1e1071682
kubernetes-node-linux-s390x.tar.gz	9f58799e9d89810a4a1bb2579445ef584f795e1250338807bc082e6fa4d0c8063b3eb6857a98999bf85d7dfe6b6949ae1f9a888fec7e97f458d188fd85135f2e
kubernetes-node-windows-amd64.tar.gz	3750fbcf32e00ad6510b2ade2b6dff7ea26aaadc986cc565c22c254bf5726ef86c6340b1c4d4fb9cb6d433c49e2eeeaa0de4041555e6498f2470bb3b8ce84356

Changelog since v1.15.1

- Fix CVE-2019-11249: Incomplete fixes for CVE-2019-1002101 and CVE-2019-11246, kubectl cp potential directory traversal (#80436)
- Fix CVE-2019-11247: API server allows access to custom resources via wrong scope (#80750)

See also the security announcement for this release.

v1.15.1

Documentation

Downloads for v1.15.1

filename	sha512 hash
kubernetes.tar.gz	75cdef9f2e7e246a7833b454282858574bea37aea207d967599f49777e2998c49bf04e6c314b83b0debbbbaf50abd724cbb621ca7b909ede720305ae701c4e89
kubernetes-src.tar.gz	52ead4397b3fbcaca927e82ed70bc8a7dae2ce806c60499618a415ca6f697db61e5101a8deafa77dfb80e26e80276ca584c463f53c18436646f33f618a816dc0

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	d331d981b3cce9cd60a43f6a30482b4d7178f07d940b9a0644b3651bb2516ada6e940dee021fce5061c81546cab6134f582ddc2f7f238fba24bb3e0509b7043b
kubernetes-client-darwin-amd64.tar.gz	64740289806c40337c019605697e667b16120b44459ce13fb7f8c2db754e5ef61de6a34a418789afbd56a1ae4a7646cb38dc4ec20958632dd177f4bbaf0817d8
kubernetes-client-linux-386.tar.gz	2ebc06c0c63ee4c0ef4bf30661fb639979cd81374e907ce8c2289303d874680343d69d0ec1b6f2706c82bb27349388a3d5be53f8d21965fadb4bccc0ed567798
kubernetes-client-linux-amd64.tar.gz	b1830b66e69b96ca092da19adb97cc61b8af70b4d512c7ba8a3ec64c7f41d8db6bf225c63f408d70d42eecfca9f8868141674aecb00268cec5baa72bb7a9a217
kubernetes-client-linux-arm.tar.gz	4d16fc26fd980c95f29cdc6b7b7a05c92e7ce2347aa06871c35b856b74d5000a7495223843c1bbe785bddd5cb0cbf7e4fa1cf5bfd8abc7669dbe12f82b3b36b9
kubernetes-client-linux-arm64.tar.gz	fa1e5355768d4dcd7c2dcf6364e31b8ba5b9dd9b9f67eca04a8f60f334ab82aba327e828892dab89f7cea00f3531b47222abf34b9204672ad592ba81ef62a5e2
kubernetes-client-linux-ppc64le.tar.gz	4a60ebd26393fa0d404e51fa6cfdc79e1d141bbada74578ff68f5426b770981700a6d1d64be0e063817d2de6502088c0c9c4dadcf58b067015b71ba48e1a255f
kubernetes-client-linux-s390x.tar.gz	b50dd9f013c028395f21d487f8157a2093c13b178ade5751fd3afed745ba0280ffcc620834e68579e07d2a3ff5ef1ba7435575be2a18ff14cb91cf056f2cb4f0
kubernetes-client-windows-386.tar.gz	83838859a420d4eb6fdebcf8c10e2e2162cb51088cd6e735ea692abc8642992d87d3693a9bab7f517f91f73c302ed8b66e5c4056749430fbdb1ed3b16038871d
kubernetes-client-windows-amd64.tar.gz	50b2aff80ecee3a01a76345b90ef9e8c13002ae0ebd51289d80af654954a64f989cd254829fa12f5be954f2a48d1f4226ed36d9c548ddb3e9838b08193ec8abe

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	5080c5f955c27b678b173af0f34b1dcac00437b7b93f368fd7315a1e61eb35eaee8df7da6af92f205a89a1c48825a98470c8fd3210a539c35cc81c9740a48781
kubernetes-server-linux-arm.tar.gz	e1983d3dd28d915d2d2bc232f1205d8b1ffe1c6afd7be6f488eaab121df31e922c332ee3fa618b745cb0130997e293d8e9d14d88eaae74b97c0de69a9b26c72b
kubernetes-server-linux-arm64.tar.gz	d59bbab5acadd6918341b37f1edbaadb4745d960b0a81e817a87f6aadaa1bd721f9774186b5475ab16047a52fe3324e1df6f3e2c2c3a68e04d9b7ca30b68e97e
kubernetes-server-linux-ppc64le.tar.gz	6be4abc81ab762fbe3872b598b654bb5d8d14c4f47746c939543aa63d5ca39e054ff017f58ec9ba4ba2fbc56cb5d757da30d9f09b1ae7a780c6def6daeba5594
kubernetes-server-linux-s390x.tar.gz	67ae29519a5864bff4afbd7000a603db1571b14af82dad041808384ea3d0f6fde7f6fda6c6d27dff9f45c006935232b76d4161c12c22b3bf47448cc0354a95b7

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	e29961aa6519d0bb6d2e41ba599abde1f0a19736a5fcce939e236cba91e70b07c95f7df8ffeb46207e6c898f6439e43d11293715cabcc082e979c874ac48d557
kubernetes-node-linux-arm.tar.gz	4e74ff45c833b762dcf3495349ae91ad77939df685f5bd4b47ff21c7aa1751d80e88652165c3acb12b842ae1277242f84f05fa77e350397de64894b158cf38eb
kubernetes-node-linux-arm64.tar.gz	86bd8ce2ef600b8fd2d7ae2cf5f6128d66fb1409a0d9df6698e2fbfb12eb2eff985eede340032624965166cdcdc1335c2462c274a555c509a54c58e30034db38
kubernetes-node-linux-ppc64le.tar.gz	fb1f00a87d39aad6cb44cd5ae334217cb57eb68d8003844ecc6cd043826f3c85f3baabb765f03114df686b421006bc88c75bd8b540f75eaa1328d066b7189f5a
kubernetes-node-linux-s390x.tar.gz	b333913b7736ba367dac8dcd95673f71820f198442adddff5a4454dc0e3996d60ebce8d64016398948a41cb436c06afdb55fb8e4b27d9418ab1450c581f6fd3d
kubernetes-node-windows-amd64.tar.gz	d064ae274f10cda36a70d332623f7f7c464b0f161d9954e66dd9892f95c590f519afd54fee0dbebdee1661cc642fea86fcf2a9222f6b22a2d0e4e4104f403b5b

Changelog since v1.15.0

Other notable changes

- kubeadm: implement support for concurrent add/remove of stacked etcd members (#79677, @neolit123)
- Fixes a bug in openapi published for custom resources using x-kubernetes-preserve-unknown-fields extensions, so that kubectl will allow sending unknown fields for that portion of the object. (#79636, @liggitt)
- Resolves an issue serving aggregated APIs backed by services that respond to requests to `/` with non-2xx HTTP responses (#79895, @deads2k)
- changes timeout value in csi plugin from 15s to 2min which fixes the timeout issue (#79529, @andyzhangx)
- kubeadm: fix the bug that "--cri-socket" flag does not work for `kubeadm reset` (#79498, @SataQiu)
- fix kubelet fail to delete orphaned pod directory when the kubelet's pods directory (default is "/var/lib/kubelet/pods") symbolically links to another disk device's directory (#79094, @gaorong)
- Fix possible fd leak and closing of dirs in doSafeMakeDir (#79534, @odinuge)
- Default resourceGroup should be used when the value of annotation azure-load-balancer-resource-group is an empty string. (#79514, @feiskyer)
- The CRD handler now properly re-creates stale CR storage to reflect CRD update. (#79114, @roycaihw)
- fix pod stuck issue due to corrupt mnt point in flexvol plugin, call Unmount if PathExists returns any error (#75234, @andyzhangx)
- Fix a bug where kubelet would not retry pod sandbox creation when the restart policy of the pod is Never (#79451, @yujuhong)
- Remove pids cgroup controller requirement when related feature gates are disabled (#79073, @rafatio)
- Fix remove the etcd member from the cluster during a kubeadm reset. (#79326, @bradbeam)

v1.15.0

Documentation

Downloads for v1.15.0

filename	sha512 hash
kubernetes.tar.gz	cb03adc8bee094b93652a19cb77ca4b7b0b2ec201cf9c09958128eb93b4c717514fb423ef60c8fdd2af98ea532ef8d9f3155a684a3a7dc2a20cba0f8d7821a79
kubernetes-src.tar.gz	a682c88539b46741f6f3b2fa27017d52e88149e0cf0fe49c5a84ff30018cfa18922772a49828091364910570cf5f6b4089a128b400f48a278d6ac7b18ef84635

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	bb14d564f5c2e4da964f6dcaf4026ac7371b35ecf5d651d226fb7cc0c3f194c1540860b7cf5ba35c1ebbdf683cefd8011bd35d345cf6707a1584f6a20230db96
kubernetes-client-darwin-amd64.tar.gz	8c218437588d960f6782576038bc63af5623e66291d37029653d4bdbba5e19b3e8a8a0225d250d76270ab243aa97fa15ccaf7cae84fefc05a129c05687854c0e
kubernetes-client-linux-386.tar.gz	6a17e7215d0eb9ca18d4b55ee179a13f1f111ac995aad12bf2613b9dbee1a6a3a25e8856fdb902955c47d076131c03fc074fad5ad490bc09d6dc53638a358582
kubernetes-client-linux-amd64.tar.gz	0906a8f7de1e5c5efd124385fdee376893733f343d3e8113e4f0f02dfae6a1f5b12dca3e2384700ea75ec39985b7c91832a3aeb8fa4f13ffd736c56a86f23594
kubernetes-client-linux-arm.tar.gz	1d3418665b4998d6fff1c137424eb60302129098321052d7c5cee5a0e2a5624c9eb2fd19c94b50a598ddf039664e5795e97ba99ae66aabc0ee79f48d23c30a65
kubernetes-client-linux-arm64.tar.gz	986d6bec386b3bb427e49cd7e41390c7dc5361da4f2f7fc2a823507f83579ea1402de566651519bf83267bf2a92dc4bc40b72bb587cdc78aa8b9027f629e8436
kubernetes-client-linux-ppc64le.tar.gz	81315af33bc21f9f8808b125e1f4c7a1f797c70f01098fe1fe8dba73d05d89074209c70e39b0fd8b42a5e43f2392ece3a070b9e83be5c4978e82ddad3ce09452
kubernetes-client-linux-s390x.tar.gz	485978a24ba97a2a2cac162a6984d4b5c32dbe95882cf18d2fd2bf74477f689abc6e9d6b10ec016cd5957b0b71237cd9c01d850ff1c7bd07a561d0c2d6598ee7

kubernetes-client-windows-386.tar.gz	9a1b5d0f6fbfc85269e9bd7e08be95eeb9a11f43ea38325b8a736e768f3e855e681eef17508ca0c9da6ab9cbed2875dba5beffc91d1418316b7ca3efa192c768
kubernetes-client-windows-amd64.tar.gz	f2f0221c7d364e3e71b2d9747628298422441c43b731d58c14d7a0ed292e5f12011780c482bdb8f613ddc966868fd422e4ca01e4b522601d74cdee49c59a1766

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	fee0200887c7616e3706394b0540b471ad24d57bb587a3a7154adfcd212c7a2521605839b0e95c23d61c86f6c21ef85c63f0d0a0504ba378b4c28cd110771c31
kubernetes-server-linux-arm.tar.gz	2d329ec0e231dbd4ec750317fc45fb8a966b9a81b45f1af0dde3ca0d1ae66a5ade39c6b64f6a1a492b55f6fca04057113ec05de61cb0f11caeee2fb7639e7775
kubernetes-server-linux-arm64.tar.gz	0fb64d934d82c17eee15e1f97fc5eeeb4af6e042c30abe41a4d245cde1d9d81ee4dad7e0b0b3f707a509c84fce42289edd2b18c4e364e99a1c396f666f114dcf
kubernetes-server-linux-ppc64le.tar.gz	5cac4b5951692921389db280ec587037eb3bb7ec4ccf08599ecee2fa39c2a5980df9aba80fc276c78b203222ad297671c45a9fed690ad7bcd774854bd918012b
kubernetes-server-linux-s390x.tar.gz	39a33f0bb0e06b34779d741e6758b6f7d385e0b933ab799b233e3d4e317f76b5d1e1a6d196f3c7a30a24916ddb7c3c95c8b1c5f6683bce709b2054e1fc018b77

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	73abf50e44319763be3124891a1db36d7f7b38124854a1f223ebd91dce8e848a825716c48c9915596447b16388e5b752ca90d4b9977348221adb8a7e3d2242fd
kubernetes-node-linux-arm.tar.gz	b7ddb82efa39ba5fce5b4124d83279357397a1eb60be24aa19ccbd8263e5e6146bfaff52d7f5167b14d6d9b919c4dcd34319009701e9461d820dc40b015890a0
kubernetes-node-linux-arm64.tar.gz	458f20f7e9ca2ebddef8738de6a2baa8b8d958b22a935e4d7ac099b07bed91fe44126342faa8942cf23214855b20d2a52fcb95b1fbb8ae6fe33b601ecdbf0c39
kubernetes-node-linux-ppc64le.tar.gz	d4d5bfe9b9d56495b00322f62aed0f76029d774bff5004d68e85a0db4fb3b4ceb3cef79a4f56e322b8bb47b4adbf3966cff0b5a24f9678da02122f2024ecc6cd
kubernetes-node-linux-s390x.tar.gz	b967034c8db871a7f503407d5a096fcd6811771c9a294747b0a028659af582fbc47061c388adfabf1c84cd73b33f7bbf5377eb5b31ab51832ea0b5625a82e799
kubernetes-node-windows-amd64.tar.gz	dd021d8f2a3d9ddff6e88bce678c28cc0f38165a5d7a388df952d900dcfd1dcaf45c7e75c6387d061014cba15aaf7453905a46e84ddd8b3f8eff2539d50fce9b

Kubernetes v1.15 Release Notes

1.15 What's New

A complete changelog for the release notes is now hosted in a customizable format at https://relnotes.k8s.io/. Check it out and please give us your feedback!

Kubernetes 1.15 consists of **25 enhancements**: 2 moving to stable, 13 in beta, and 10 in alpha. The main themes of this release are:

Continuous Improvement

- Project sustainability is not just about features. Many SIGs have been working on improving test coverage, ensuring the basics stay reliable, and stability of the core feature set and working on maturing existing features and cleaning up the backlog.

Extensibility

- The community has been asking for continuing support of extensibility, so this cycle features more work around CRDs and API Machinery. Most of the enhancements in this cycle were from SIG API Machinery and related areas.

Extensibility around core Kubernetes APIs

CustomResourceDefinitions Pruning

To enforce both data consistency and security, Kubernetes performs pruning, or the automatic removal of unknown fields in objects sent to a Kubernetes API. An "unknown" field is one that is not specified in the OpenAPI validation schema. This behavior is already in place for native resources and ensures only data structures specified by the CRD developer are persisted to etcd. It will be available as a beta feature in Kubernetes 1.15.

Pruning is activated by setting `spec.preserveUnknownFields: false` in the CustomResourceDefinition. A future apiextensions.k8s.io/v1 variant of CRDs will enforce pruning.

Pruning requires that CRD developer provides complete, structural validation schemas, either at the top-level or for all versions of the CRD.

CustomResourceDefinition Defaulting

CustomResourceDefinitions also have new support for defaulting, with defaults specified using the `default` keyword in the OpenAPI validation schema. Defaults are set for unspecified fields in an object sent to the API, and when reading from etcd.

Defaulting will be available as alpha in Kubernetes 1.15 and requires structural schemas.

CustomResourceDefinition OpenAPI Publishing

OpenAPI specs for native types have long been served at /openapi/v2, and they are consumed by a number of components, notably kubectl client-side validation, kubectl explain and OpenAPI based client generators.

With Kubernetes 1.15 as beta, OpenAPI schemas are also published for CRDs, as long as their schemas are structural.

These changes are reflected in the following Kubernetes enhancements: (#383), (#575), (#492), (#598), (#692), (#95), (#995), (#956)

Cluster Lifecycle Stability and Usability Improvements

Work on making Kubernetes installation, upgrade and configuration even more robust has been a major focus for this cycle for SIG Cluster Lifecycle (see the May 6, 2019 Community Update). Bug fixes across bare metal tooling and production-ready user stories, such as the high availability use cases have been given priority for 1.15.

kubeadm, the cluster lifecycle building block, continues to receive features and stability work required for bootstrapping production clusters efficiently. kubeadm has promoted high availability (HA) capability to beta, allowing users to use the familiar `kubeadm init` and `kubeadm join` commands to configure and deploy an HA control plane. An entire new test suite has been created specifically for ensuring these features will stay stable over time.

Certificate management has become more robust in 1.15, with kubeadm now seamlessly rotating all your certificates (on upgrades) before they expire. Check the kubeadm documentation for information on how to manage your certificates.

The kubeadm configuration file API is moving from v1beta1 to v1beta2 in 1.15.

These changes are reflected in the following Kubernetes enhancements: (#357), (#970)

Continued improvement of CSI

In Kubernetes v1.15, SIG Storage continued work to enable migration of in-tree volume plugins to the Container Storage Interface (CSI). SIG Storage worked on bringing CSI to feature parity with in-tree functionality, including functionality like resizing, inline volumes, and more. SIG Storage introduces new alpha functionality in CSI that doesn't exist in the Kubernetes Storage subsystem yet, like volume cloning.

Volume cloning enables users to specify another PVC as a "DataSource" when provisioning a new volume. If the underlying storage system supports this functionality and implements the "CLONE_VOLUME" capability in its CSI driver, then the new volume becomes a clone of the source volume.

These changes are reflected in the following Kubernetes enhancements: (#625)

Additional Notable Feature Updates

- Support for go modules in Kubernetes Core.
- Continued preparation for cloud provider extraction and code organization. The cloud provider code has been moved to kubernetes/legacy-cloud-providers for easier removal later and external consumption.
- Kubectl get and describe now works with extensions
- Nodes now support third party monitoring plugins.
- A new Scheduling Framework for schedule plugins is now Alpha.
- Continued deprecation of extensions/v1beta1, apps/v1beta1, and apps/v1beta2 APIs; these extensions will be retired in 1.16!

Check the release notes website for the complete changelog of notable features and fixes.

Known Issues

- Concurrently joining control-plane nodes does not work as expected in kubeadm 1.15.0. The feature was planned for release in 1.15.0, but a fix may come in a follow up patch release.
- Using `--log-file` is known to be problematic in 1.15. This presents as things being logged multiple times to the same file. The behaviour and details of this issue, as well as some preliminary attempts at fixing it are documented here

Urgent Upgrade Notes

(No, really, you MUST read this before you upgrade)

API Machinery

- `k8s.io/kubernetes` and published components (such as `k8s.io/client-go` and `k8s.io/api`) now contain go module files including dependency version information. See go-modules for details on consuming `k8s.io/client-go` using go modules. (#74877, @liggitt)

Apps

- Hyperkube short aliases have been removed from source code, because hyperkube docker image currently creates these aliases. (#76953, @Rand01ph)

Auth

- The Rancher credential provider has now been removed. This only affects you if you are using the downstream Rancher distro. (#77099, @dims)

AWS

- The `system:aws-cloud-provider` cluster role, deprecated in v1.13, is no longer auto-created. Deployments using the AWS cloud provider should grant required permissions to the `aws-cloud-provider` service account in the `kube-system` namespace as part of deployment. (#66635, @wgliang)

Azure

- Kubelet can now run without identity on Azure. A sample cloud provider configuration is: `{"vmType": "vmss", "useInstanceMetadata": true, "subscriptionId": "<subscriptionId>"}` (#77906, @feiskyer)
- Multiple Kubernetes clusters can now share the same resource group
  - When upgrading from previous releases, issues will arise with public IPs if multiple clusters share the same resource group. To solve these problems, make the following changes to the cluster: Recreate the relevant LoadBalancer services, or add a new tag 'kubernetes-cluster-name: ' manually for existing public IPs. Configure each cluster with a different cluster name using `kube-controller-manager --cluster-name=<cluster-name>` (#77630, @feiskyer)
- The cloud config for Azure cloud provider can now be initialized from Kubernetes secret azure-cloud-provider in kube-system namespace

- the secret is a serialized version of `azure.json` file with key cloud-config. And the secret name is azure-cloud-provider.
- A new option cloudConfigType has been added to the cloud-config file. Supported values are: `file`, `secret` and `merge` (`merge` is the default value).
- To allow Azure cloud provider to read secrets, the RBAC rules should be configured.

CLI

- `kubectl scale job`, deprecated since 1.10, has been removed. (#78445, @soltysh)
- The deprecated `--pod` / `-p` flag for `kubectl exec` has been removed. The flag has been marked as deprecated since k8s version v1.12. (#76713, @prksu)

Lifecycle

- Support for deprecated old kubeadm v1alpha3 config has been totally removed. (#75179, @rosti)
- kube-up.sh no longer supports "centos" and "local" providers. (#76711, @dims)

Network

- The deprecated flag `--conntrack-max` has been removed from kube-proxy. Users of this flag should switch to `--conntrack-min` and `--conntrack-max-per-core` instead. (#78399, @rikatz)
- The deprecated kube-proxy flag `--cleanup-iptables` has been removed. (#78344, @aramase)

Node

- The deprecated kubelet security controls `AllowPrivileged`, `HostNetworkSources`, `HostPIDSources`, and `HostIPCSources` have been removed. Enforcement of these restrictions should be done through admission control (such as `PodSecurityPolicy`) instead. (#77820, @dims)
- The deprecated Kubelet flag `--allow-privileged` has been removed. Remove any use of the flag from your kubelet scripts or manifests. (#77820, @dims)
- The kubelet now only collects cgroups metrics for the node, container runtime, kubelet, pods, and containers. (#72787, @dashpole)

Storage

- The `Node.Status.Volumes.Attached.DevicePath` field is now unset for CSI volumes. You must update any external controllers that depend on this field. (#75799, @msau42)
- CSI alpha CRDs have been removed (#75747, @msau42)
- The `StorageObjectInUseProtection` admission plugin is enabled by default, so the default enabled admission plugins are now `NamespaceLifecycle,LimitRanger,ServiceAccount,PersistentVolumeLabel,DefaultStorageClass,DefaultTolerationSeconds,MutatingAdmiss`: Please note that if you previously had not set the `--admission-control` flag, your cluster behavior may change (to be more standard). (#74610, @oomichi)

Deprecations and Removals

- kubectl
  - `kubectl convert`, deprecated since v1.14, will be removed in v1.17.
  - The `--export` flag for the `kubectl get` command, deprecated since v1.14, will be removed in v1.18.
  - The `--pod` / `-p` flag for `kubectl exec`, deprecated since 1.12, has been removed.
  - `kubectl scale job`, deprecated since 1.10, has been removed. (#78445, @soltysh)
- kubelet
  - The `beta.kubernetes.io/os` and `beta.kubernetes.io/arch` labels, deprecated since v1.14, are targeted for removal in v1.18.
  - The `--containerized` flag, deprecated since v1.14, will be removed in a future release.
  - cAdvisor json endpoints have been deprecated. (#78504, @dashpole)
- kube-apiserver
  - The `--enable-logs-handler` flag and log-serving functionality is deprecated, and scheduled to be removed in v1.19. (#77611, @rohitsardesai83)
- kube-proxy
  - The deprecated `--cleanup-iptables` has been removed,. (#78344, @aramase)
- API
  - Ingress resources will no longer be served from `extensions/v1beta1` in v1.19. Migrate use to the `networking.k8s.io/v1beta1` API, available since v1.14. Existing persisted data can be retrieved via the `networking.k8s.io/v1beta1` API.
  - NetworkPolicy resources will no longer be served from `extensions/v1beta1` in v1.16. Migrate use to the `networking.k8s.io/v1` API, available since v1.8. Existing persisted data can be retrieved via the `networking.k8s.io/v1` API.
  - PodSecurityPolicy resources will no longer be served from `extensions/v1beta1` in v1.16. Migrate to the `policy/v1beta1` API, available since v1.10. Existing persisted data can be retrieved via the `policy/v1beta1` API.
  - DaemonSet, Deployment, and ReplicaSet resources will no longer be served from `extensions/v1beta1`, `apps/v1beta1`, or `apps/v1beta2` in v1.16. Migrate to the `apps/v1` API, available since v1.9. Existing persisted data can be retrieved via the `apps/v1` API.
  - PriorityClass resources will no longer be served from `scheduling.k8s.io/v1beta1` and `scheduling.k8s.io/v1alpha1` in v1.17. Migrate use to the `scheduling.k8s.io/v1` API, available since v1.14. Existing persisted data can be retrieved via the `scheduling.k8s.io/v1` API.
  - The `export` query parameter for list API calls, deprecated since v1.14, will be removed in v1.18.
  - The `series.state` field in the events.k8s.io/v1beta1 Event API is deprecated and will be removed in v1.18 (#75987, @yastij)
- kubeadm
  - The `kubeadm upgrade node config` and `kubeadm upgrade node experimental-control-plane` commands are deprecated in favor of `kubeadm upgrade node`, and will be removed in a future release. (#78408, @fabriziopandini)
  - The flag `--experimental-control-plane` is now deprecated in favor of `--control-plane`. The flag `--experimental-upload-certs` is now deprecated in favor of `--upload-certs` (#78452, @fabriziopandini)
  - `kubeadm config upload` has been deprecated, as its replacement is now graduated. Please use `kubeadm init phase upload-config` instead. (#77946, @Klaven)
- The following features are now GA, and the associated feature gates are deprecated and will be removed in v1.17:

- `GCERegionalPersistentDisk`

Metrics Changes

Added metrics

- The metric `kube_proxy_sync_proxy_rules_last_timestamp_seconds` is now available, indicating the last time that kube-proxy successfully applied proxying rules. (#74027, @squeed)
- `process_start_time_seconds` has been added to kubelet's '/metrics/probes' endpoint (#77975, @logicalhan)
- Scheduler: added metrics to record the number of pending pods in different queues (#75501, @Huang-Wei)
- Exposed CSI volume stats via kubelet volume metrics (#76188, @humblec)
- Added a new `storage_operation_status_count` metric for kube-controller-manager and kubelet to count success and error statues. (#75750, @msau42)

Deprecated/changed metrics

- kubelet probe metrics are now of the counter type rather than the gauge type, and the `prober_probe_result` has been replaced by `prober_probe_total`. (#76074, @danielqsj)
- The `transformer_failures_total` metric is deprecated in favor of `transformation_operation_total`. The old metric will continue to be populated but will be removed in a future release. (#70715, @immutableT)
- Introducing new semantic for metric `volume_operation_total_seconds` to be the end to end latency of volume provisioning/deletion. Existing metric "storage_operation_duration_seconds" will remain untouched, however it is exposed to the following potential issues:

  1. For volumes provisioned/deleted via external provisioner/deleter, `storage_operation_duration_seconds` will NOT wait for the external operation to be done before reporting latency metric (effectively close to 0). This will be fixed by using `volume_operation_total_seconds` instead
  2. if there's a transient error happened during "provisioning/deletion", i.e., a volume is still in-use while a deleteVolume has been called, original `storage_operation_duration_seconds` will NOT wait until a volume has been finally deleted before reporting an inaccurate latency metric. The newly implemented metric `volume_operation_total_seconds`, however, waits until a provisioning/deletion operation has been fully executed.

  Potential impacts: If an SLO/alert has been defined based on `volume_operation_total_seconds`, it might get violated because of the more accurate metric might be significantly larger than previously reported. The metric is defined to be a histogram and the new semantic could change the distribution. (#78061, @yuxiangqian)
- Implement the scheduling framework with `Reserve`, `Prebind`, `Permit`, `Post-bind`, `Queue sort` and `Unreserve` extension points. (#77567, @wgliang) (#77559, @ahg-g) (#77529, @draveness) (#77598, @danielqsj) (#77501, @JieJhih) (#77457, @danielqsj)
- Replaced *_admission_latencies_milliseconds_summary and *_admission_latencies_milliseconds metrics because they were reporting seconds rather than milliseconds. They were also subject to multiple naming guideline violations (units should be in base units and "duration" is the best practice labelling to measure the time a request takes). Please convert to use *_admission_duration_seconds and *_admission_duration_seconds_summary, as these now report the unit as described, and follow the instrumentation best practices. (#75279, @danielqsj)
- Fixed admission metrics histogram bucket sizes to cover 25ms to ~2.5 seconds. (#78608, @jpbetz)
- Fixed incorrect prometheus azure metrics. (#77722, @andyzhangx)
- `kubectl scale job`, deprecated since 1.10, has been removed. (#78445, @soltysh)

Notable Features

Stable

- The kube-apiserver's `watch` can now be enabled for events using the `--watch-cache-sizes` flag. (#74321, @yastij)

Beta

- Admission webhooks can now register for a single version of a resource (for example, `apps/v1 deployments`) and be called when any other version of that resource is modified (for example `extensions/v1beta1 deployments`). This allows new versions of a resource to be handled by admission webhooks without needing to update every webhook to understand the new version. See the API documentation for the `matchPolicy: Equivalent` option in MutatingWebhookConfiguration and ValidatingWebhookConfiguration types. (#78135, @liggitt)
- Third party device monitoring is now beta, and enabled by default (KubeletPodResources). (#77274, @RenaudWasTaken)
- The CustomResourcePublishOpenAPI feature is now beta and enabled by default. CustomResourceDefinitions with structural schemas now publish schemas in the OpenAPI document served at `/openapi/v2`. CustomResourceDefinitions with non-structural schemas have a `NonStructuralSchema` condition added with details about what needs to be corrected in the validation schema. (#77825, @roycaihw)
- Online volume expansion (ExpandInUsePersistentVolumes) is now a beta feature. As such, it is enabled by default. (#77755, @gnufied)
- The `SupportNodePidsLimit` feature is now beta, and enabled by default. It is no longer necessary to set the feature gate `SupportNodePidsLimit=true`. (#76221, @RobertKrawitz)
- kubeadm now includes the ability to specify certificate encryption and decryption keys for the upload and download certificate phases as part of the new v1beta2 kubeadm config format. (#77012, @rosti)
- You can now use kubeadm's `InitConfiguration` and `JoinConfiguration` to define which preflight errors will be ignored. (#75499, @marccarre)
- CustomResourcesDefinition conversion via Web Hooks is promoted to beta. Note that you must set `spec.preserveUnknownFields` to `false`. (#78426, @sttts)
- Group Managed Service Account support has moved to a new API for beta. Special annotations for Windows GMSA support have been deprecated. (#75459, @wk8)
- The `storageVersionHash` feature is now beta. `StorageVersionHash` is a field in the discovery document of each resource. It enables clients to detect whether the storage version of that resource has changed. Its value must be treated as opaque by clients. Only equality comparison on the value is valid. (#78325, @caesarxuchao)
- Ingress objects are now persisted in etcd using the `networking.k8s.io/v1beta1` version (#77139, @cmluciano)
- NodeLocal DNSCache graduating to beta. (#77887, @prameshj)

Alpha

- You can now create a non-preempting Pod priority (NonPreemptingPriority). If set on a class, the pod will continue to be prioritized above queued pods of a lesser class, but will not preempt running pods. (#74614, @denkensk)
- kubelet now allows the use of XFS quotas (on XFS and suitably configured ext4fs filesystems) to monitor storage consumption for ephemeral storage. This method of monitoring consumption, which is currently available only for `emptyDir` volumes, is faster and more accurate than the old method of walking the filesystem tree. Note that it does not enforce limits, it only monitors consumption. To utilize this functionality, set the feature gate `LocalStorageCapacityIsolationFSQuotaMonitoring=true`. For ext4fs filesystems, create the filesystem with `mkfs.ext4 -O project <block_device>` and run `tune2fs -Q prjquota` block device `; XFS filesystems need no additional preparation. The filesystem must be mounted with option` project `in` /etc/fstab `. If the primary partition is the root filesystem, add` rootflags=pquota` to the GRUB config file. (#66928, @RobertKrawitz)
- Finalizer Protection for Service LoadBalancers (ServiceLoadBalancerFinalizer) has been added as an Alpha feature, which is disabled by default. This feature ensures the Service resource is not fully deleted until the correlating load balancer resources are deleted. (#78262, @MrHohn)
- Inline CSI ephemeral volumes can now be controlled with PodSecurityPolicy when the CSIInlineVolume alpha feature is enabled. (#76915, @vladimirvivien)
- Kubernetes now includes an alpha field, `AllowWatchBookmarks`, in ListOptions for requesting the watching of bookmarks from apiserver. The implementation in apiserver is hidden behind the feature gate `WatchBookmark`. (#74074, @wojtek-t)

Staging Repositories

- The CRI API is now available in the `k8s.io/cri-api` staging repository. (#75531, @dims)
- Support for the Azure File plugin has been added to `csi-translation-lib` (CSIMigrationAzureFile). (#78356, @andyzhangx)
- Added support for Azure Disk plugin to csi-translation-lib (CSIMigrationAzureDisk) (#78330, @andyzhangx)

CLI Improvements

- Added `kubeadm upgrade node`. This command can be used to upgrade both secondary control-plane nodes and worker nodes. The `kubeadm upgrade node config` and `kubeadm upgrade node experimental-control-plane` commands are now deprecated. (#78408, @fabriziopandini)
- The `kubectl top` command now includes a `--sort-by` option to sort by `memory` or `cpu`. (#75920, @artmello)
- `kubectl rollout restart` now works for DaemonSets and StatefulSets. (#77423, @apelisse)
- `kubectl get --watch=true` now prints custom resource definitions with custom print columns. (#76161, @liggitt)
- Added `kubeadm alpha certs certificate-key` command to generate secure random key to use on `kubeadm init --experimental-upload-certs` (#77848, @yagonobre)
- Kubernetes now supports printing the `volumeMode` using `kubectl get pv/pvc -o wide` (#76646, @cwdsuzhou)
- Created a new `kubectl rollout restart` command that does a rolling restart of a deployment. (#76062, @apelisse)
- `kubectl exec` now allows using the resource name to select a matching pod and `--pod-running-timeout` flag to wait till at least one pod is running. (#73664, @prksu)
- `kubeadm alpha certs renew` and `kubeadm upgrade` now supports renewal of certificates embedded in KubeConfig files managed by kubeadm; this does not apply to certificates signed by external CAs. (#77180, @fabriziopandini)
- Kubeadm: a new command `kubeadm alpha certs check-expiration` was created in order to help users in managing expiration for local PKI certificates (#77863, @fabriziopandini)

Misc

- Service account controller clients to now use the TokenRequest API, and tokens are periodically rotated. (#72179, @WanLinghao)
- Added `ListPager.EachListItem` utility function to client-go to enable incremental processing of chunked list responses (#75849, @jpbetz)
- Object count quota is now supported for namespaced custom resources using the `count/<resource>.<group>` syntax. (#72384, @zhouhaibing089)
- Added completed job status in Cron Job event. (#75712, @danielqsj)
- Pod disruption budgets can now be updated and patched. (#69867, @davidmccormick)
- Add CRD spec.preserveUnknownFields boolean, defaulting to true in v1beta1 and to false in v1 CRDs. If false, fields not specified in the validation schema will be removed when sent to the API server or when read from etcd. (#77333, @sttts)
- Added RuntimeClass restrictions and defaulting to PodSecurityPolicy. (#73795, @tallclair)
- Kubelet plugin registration now has retry and exponential backoff logic for when registration of plugins (such as CSI or device plugin) fail. (#73891, @taragu)
- proxy/transport now supports Content-Encoding: deflate (#76551, @JieJhih)
- Admission webhooks are now properly called for `scale` and `deployments/rollback` subresources. (#76849, @liggitt)

API Changes

- CRDs get support for x-kubernetes-int-or-string to allow faithful representation of IntOrString types in CustomResources.(#78815, @sttts)
- Introduced the `v1beta2` config format to kubeadm. (#76710, @rosti)
- Resource list requests for `PartialObjectMetadata` now correctly return list metadata like the resourceVersion and the continue token. (#75971, @smarterclayton)
- Added a condition `NonStructuralSchema` to `CustomResourceDefinition` listing Structural Schema violations as defined in the KEP. CRD authors should update their validation schemas to be structural in order to participate in future CRD features. (#77207, @sttts)
- Promoted meta.k8s.io/v1beta1 Table and PartialObjectMetadata to v1. (#77136, @smarterclayton)
- Introduced the flag `--ipvs-strict-arp` to configure stricter ARP sysctls, defaulting to false to preserve existing behaviors. This was enabled by default in 1.13.0, which impacted a few CNI plugins. (#75295, @lbernail)
- CRD validation schemas should not specify `metadata` fields other than `name` and `generateName`. A schema will not be considered structural (and therefore ready for future features) if `metadata` is specified in any other way. (#77653, @sttts)

Other notable changes

API Machinery

- Added port configuration to Admission webhook configuration service reference.
- Added port configuration to AuditSink webhook configuration service reference.
- Added port configuration to CRD Conversion webhook configuration service reference.
- Added port configuration to kube-aggregator service reference. (#74855, @mbohlool)
- Implemented deduplication logic for v1beta1.Event API (#65782, @yastij)

- Added `objectSelector` to admission webhook configurations. `objectSelector` is evaluated the oldObject and newObject that would be sent to the webhook, and is considered to match if either object matches the selector. A null object (oldObject in the case of create, or newObject in the case of delete) or an object that cannot have labels (like a DeploymentRollback or a PodProxyOptions object) is not considered to match. Use the object selector only if the webhook is opt-in, because end users may skip the admission webhook by setting the labels. (#78505, @caesarxuchao)
- Watch will now support converting response objects into Table or PartialObjectMetadata forms. (#71548, @smarterclayton)
- In CRD webhook conversion, Kubernetes will now ignore changes to metadata other than for labels and annotations. (#77743, @sttts)
- Added ListMeta.RemainingItemCount. When responding to a LIST request, if the server has more data available, and if the request does not contain label selectors or field selectors, the server sets the ListOptions.RemainingItemCount to the number of remaining objects. (#75993, @caesarxuchao)
- Clients may now request that API objects are converted to the `v1.Table` and `v1.PartialObjectMetadata` forms for generic access to objects. (#77448, @smarterclayton)
- Fixed a spurious error where update requests to the status subresource of multi-version custom resources would complain about an incorrect API version. (#78713, @liggitt)
- Fixed a bug in apiserver storage that could cause just-added finalizers to be ignored immediately following a delete request, leading to premature deletion. (#77619, @caesarxuchao)
- API requests rejected by admission webhooks which specify an http status code < 400 are now assigned a 400 status code. (#77022, @liggitt)
- Fixed a transient error API requests for custom resources could encounter while changes to the CustomResourceDefinition were being applied. (#77816, @liggitt)
- Added name validation for dynamic client methods in client-go (#75072, @lblackstone)
- CustomResourceDefinition with invalid regular expression in the pattern field of OpenAPI v3 validation schemas are no longer considered structural. (#78453, @sttts)
- API paging is now enabled by default in k8s.io/apiserver recommended options, and in k8s.io/sample-apiserver (#77278, @liggitt)
- Increased verbose level for local openapi aggregation logs to avoid flooding the log during normal operation (#75781, @roycaihw)
- k8s.io/client-go/dynamic/dynamicinformer.NewFilteredDynamicSharedInformerFactory now honours the `namespace` argument. (#77945, @michaelfig)
- client-go and kubectl no longer write cached discovery files with world-accessible file permissions. (#77874, @yuchengwu)
- Fixed an error with stuck informers when an etcd watch receives update or delete events with missing data. (#76675, @ryanmcnamara)
- `DelayingQueue.ShutDown()` can now be invoked multiple times without causing a closed channel panic. (#77170, @smarterclayton)
- When specifying an invalid value for a label, it was not always clear which label the value was specified for. Starting with this release, the label's key is included in such error messages, which makes debugging easier. (#77144, @kenegozi)
- Fixed a regression error when proxying responses from aggregated API servers, which could cause watch requests to hang until the first event was received. (#75887, @liggitt)
- Fixed a bug where dry-run is not honored for pod/eviction sub-resource. (#76969, @apelisse)
- DeleteOptions parameters for deletecollection endpoints are now published in the OpenAPI spec. (#77843, @roycaihw)
- Active watches of custom resources now terminate properly if the CRD is modified. (#78029, @liggitt)
- Fixed a potential deadlock in the resource quota controller. Enabled recording partial usage info for quota objects specifying multiple resources, when only some of the resources' usage can be determined. (#74747, @liggitt)
- Updates that remove remaining `metadata.finalizers` from an object that is pending deletion (non-nil metadata.deletionTimestamp) and has no graceful deletion pending (nil or 0 metadata.deletionGracePeriodSeconds) now results in immediate deletion of the object. (#77952, @liggitt)
- client-go: The `rest.AnonymousClientConfig(*rest.Config) *rest.Config` helper method no longer copies custom `Transport` and `WrapTransport` fields, because those can be used to inject user credentials. (#75771, @liggitt)
- Validating admission webhooks are now properly called for CREATE operations on the following resources: pods/binding, pods/eviction, bindings (#76910, @liggitt)
- Removed the function Parallelize, please convert to use the function ParallelizeUntil. (#76595, @danielqsj)

Apps

- Users can now specify a DataSource/Kind of type `PersistentVolumeClaim` in their PVC spec. This can then be detected by the external csi-provisioner and plugins if capable. (#76913, @j-griffith)
- Fixed bug in DaemonSetController causing it to stop processing some DaemonSets for 5 minutes after node removal. (#76060, @krzysztof-jastrzebski)
- StatefulSet controllers no longer force a resync every 30 seconds when nothing has changed. (#75622, @jonsabo)
- Enhanced the daemonset sync logic to avoid a problem where pods are thought to be unavailable when the controller's clock is slower than the node's clock. (#77208, @DaiHao)
- Fixed a bug that caused a DaemonSet rolling update to hang when its pod gets stuck at terminating. (#77773, @DaiHao)
- Route controller now respects rate limiting to the cloud provider on deletion; previously it was only for create. (#78581, @andrewsykim)
- Removed extra pod creation expectations when daemonset fails to create pods in batches. (#74856, @draveness)
- Resolved spurious rollouts of workload controllers when upgrading the API server, due to incorrect defaulting of an alpha procMount field in pods. (#78885, @liggitt)

Auth

- Fixed OpenID Connect (OIDC) token refresh when the client secret contains a special character. (#76914, @tsuna)
- Improved `kubectl auth can-i` command by warning users when they try to access a resource out of scope. (#76014, @WanLinghao)
- Validating admission webhooks are now properly called for CREATE operations on the following resources: tokenreviews, subjectaccessreviews, localsubjectaccessreviews, selfsubjectaccessreviews, selfsubjectrulesreviews (#76959, @sbezverk)

Autoscaling

- Horizontal Pod Autoscaling can now scale targets up even when one or more metrics are invalid/unavailable, as long as one metric indicates a scale up should occur. (#78503, @gjtempleton)

AWS

- Kubernetes will now use the zone from the node for topology aware aws-ebs volume creation to reduce unnecessary cloud provider calls. (#78276, @zhan849)
- Kubernetes now supports configure accessLogs for AWS NLB. (#78497, @M00nF1sh)
- Kubernetes now supports update LoadBalancerSourceRanges for AWS NLB(#74692, @M00nF1sh)
- Kubernetes now supports configure TLS termination for AWS NLB(#74910, @M00nF1sh)
- Kubernetes will now consume the AWS region list from the AWS SDK instead of a hard-coded list in the cloud provider. (#75990, @mcrute)
- Limit use of tags when calling EC2 API to prevent API throttling for very large clusters. (#76749, @mcrute)
- The AWS credential provider can now obtain ECR credentials even without the AWS cloud provider or being on an EC2 instance. Additionally, AWS credential provider caching has been improved to honor the ECR credential timeout. (#75587, @tiffanyfay)

Azure

- Kubernetes now supports specifying the Resource Group of the Route Table when updating the Pod network route on Azure. (#75580, @suker200)
- Kubernetes now uses instance-level update APIs for Azure VMSS loadbalancer operations. (#76656, @feiskyer)
- Users can now specify azure file share name in the azure file plugin, making it possible to use existing shares or specify a new share name. (#76988, @andyzhangx)
- You can now run kubelet with no Azure identity. A sample cloud provider configuration is: `{"vmType": "vmss", "useInstanceMetadata": true, "subscriptionId": "<subscriptionId>"}` (#77906, @feiskyer)
- Fixed some service tags not supported issues for Azure LoadBalancer service. (#77719, @feiskyer)
- Fixed an issue where `pull image` fails from a cross-subscription Azure Container Registry when using MSI to authenticate. (#77245, @norshtein)
- Azure cloud provider can now be configured by Kubernetes secrets and a new option `cloudConfigType` has been introduced. Candidate values are `file`, `secret` or `merge` (default is `merge`). Note that the secret is a serialized version of `azure.json` file with key cloud-config. And the secret name is azure-cloud-provider in kube-system namespace. (#78242, @feiskyer)

CLI

- Fixed `kubectl exec` usage string to correctly reflect flag placement. (#77589, @soltysh)
- Fixed `kubectl describe cronjobs` error of `Successful Job History Limit`. (#77347, @danielqsj)
- In the `kubectl describe` output, the fields with names containing special characters are now displayed as-is without any pretty formatting, avoiding awkward outputs. (#75483, @gsadhani)
- Fixed incorrect handling by kubectl of custom resources whose Kind is "Status". (#77368, @liggitt)
- Report cp errors consistently, providing full message whether copying to or from a pod. (#77010, @soltysh)
- Preserved existing namespace information in manifests when running `set ... --local` commands. (#77267, @liggitt)
- Support for parsing more v1.Taint forms has been added. For example, `key:effect`, `key=:effect-` are now accepted. (#74159, @dlipovetsky)

Cloud Provider

- The GCE-only flag `cloud-provider-gce-lb-src-cidrs` is now optional for external cloud providers. (#76627, @timoreimann)
- Fixed a bug where cloud-controller-manager initializes nodes multiple times. (#75405, @tghartland)

Cluster Lifecycle

- `kubeadm upgrade` now renews all the certificates used by a component before upgrading the component itself, with the exception of certificates signed by external CAs. User can eventually opt-out of certificate renewal during upgrades by setting the new flag `--certificate-renewal` to false. (#76862, @fabriziopandini)
- kubeadm still generates RSA keys when deploying a node, but also accepts ECDSA keys if they already exist in the directory specified in the `--cert-dir` option. (#76390, @rojkov)
- kubeadm now implements CRI detection for Windows worker nodes (#78053, @ksubrmnn)
- Added `--image-repository` flag to `kubeadm config images`. (#75866, @jmkeyes)
- kubeadm: The kubeadm reset command has now been exposed as phases. (#77847, @yagonobre)
- kubeadm: Improved resiliency when it comes to updating the `kubeadm-config` configmap upon new control plane joins or resets. This allows for safe multiple control plane joins and/or resets. (#76821, @ereslibre)
- kubeadm: Bumped the minimum supported Docker version to 1.13.1 (#77051, @chenzhiwei)
- Reverted the CoreDNS version to 1.3.1 for kubeadm (#78545, @neolit123)
- kubeadm: Fixed the machine readability of `kubeadm token create --print-join-command` (#75487, @displague)
- `kubeadm alpha certs renew --csr-only` now reads the current certificates as the authoritative source for certificates attributes (same as kubeadm alpha certs renew). (#77780, @fabriziopandini)
- kubeadm: You can now delete multiple bootstrap tokens at once. (#75646, @bart0sh)
- util/initsystem: Added support for the OpenRC init system (#73101, @oz123)
- Default TTL for DNS records in kubernetes zone has been changed from 5s to 30s to keep consistent with old dnsmasq based kube-dns. The TTL can be customized with command `kubectl edit -n kube-system configmap/coredns`. (#76238, @Dieken)
- Communication between the etcd server and kube-apiserver on master is now overridden to use HTTPS instead of HTTP when mTLS is enabled in GCE. (#74690, @wenjiaswe)

GCP

- [stackdriver addon] Bumped prometheus-to-sd to v0.5.0 to pick up security fixes. [fluentd-gcp addon] Bumped fluentd-gcp-scaler to v0.5.1 to pick up security fixes. [fluentd-gcp addon] Bumped event-exporter to v0.2.4 to pick up security fixes. [fluentd-gcp addon] Bumped prometheus-to-sd to v0.5.0 to pick up security fixes. [metatada-proxy addon] Bumped prometheus-to-sd v0.5.0 to pick up security fixes. (#75362, @serathius)
- [fluentd-gcp addon] Bump fluentd-gcp-scaler to v0.5.2 to pick up security fixes. (#76762, @serathius)
- The GCERegionalPersistentDisk feature gate (GA in 1.13) can no longer be disabled. The feature gate will be removed in v1.17. (#77412, @liggitt)
- GCE/Windows: When the service cannot be stopped Stackdriver logging processes are now force killed (#77378, @yujuhong)
- Reduced GCE log rotation check from 1 hour to every 5 minutes. Rotation policy is unchanged (new day starts, log file size > 100MB). (#76352, @jpbetz)
- GCE/Windows: disabled stackdriver logging agent to prevent node startup failures (#76099, @yujuhong)
- API servers using the default Google Compute Engine bootstrapping scripts will have their insecure port (`:8080`) disabled by default. To enable the insecure port, set `ENABLE_APISERVER_INSECURE_PORT=true` in kube-env or as an environment variable. (#77447, @dekkagaijin)
- Fixed a NPD bug on GCI, so that it disables glog writing to files for log-counter. (#76211, @wangzhen127)
- Windows nodes on GCE now have the Windows firewall enabled by default. (#78507, @pjh)
- Added `CNI_VERSION` and `CNI_SHA1` environment variables in `kube-up.sh` to configure CNI versions on GCE. (#76353, @Random-Liu)
- GCE clusters will include some IP ranges that are not used on the public Internet in the list of non-masq IPs. Bumped ip-masq-agent version to v2.3.0 with flag `nomasq-all-reserved-ranges` turned on. (#77458, @grayluck)
- GCE/Windows: added support for the stackdriver logging agent (#76850, @yujuhong)
- GCE Windows nodes will rely solely on kubernetes and kube-proxy (and not the GCE agent) for network address management. (#75855, @pjh)
- Ensured that the `node-role.kubernetes.io/master` taint is applied to the master with NoSchedule on GCE. (#78183, @cheftako)
- Windows nodes on GCE now use a known-working 1809 image rather than the latest 1809 image. (#76722, @pjh)
- kube-up.sh scripts now disable the KubeletPodResources feature for Windows nodes, due to issue #78628. (#78668, @mtaufen)

Instrumentation

- [metrics-server addon] Restored the ability to connect to nodes via IP addresses. (#76819, @serathius)
- If a pod has a running instance, the stats of its previously terminated instances will not show up in the kubelet summary stats any more for CRI runtimes such as containerd and cri-o. This keeps the behavior consistent with Docker integration, and fixes an issue that some container Prometheus metrics don't work when there are summary stats for multiple instances of the same pod. (#77426, @Random-Liu)

Network

- Ingress objects are now persisted in etcd using the networking.k8s.io/v1beta1 version (#77139, @cmluciano)
- Transparent kube-proxy restarts when using IPVS are now allowed. (#75283, @lbernail)
- Packets considered INVALID by conntrack are now dropped. In particular, this fixes a problem where spurious retransmits in a long-running TCP connection to a service IP could result in the connection being closed with the error "Connection reset by peer" (#74840, @anfernee)
- kube-proxy no longer automatically cleans up network rules created by running kube-proxy in other modes. If you are switching the kube-proxy mode (EG: iptables to IPVS), you will need to run `kube-proxy --cleanup` , or restart the worker node (recommended) before restarting kube-proxy. If you are not switching kube-proxy between different modes, this change should not require any action. (#76109, @vllry)
- kube-proxy: HealthzBindAddress and MetricsBindAddress now support ipv6 addresses. (#76320, @JieJhih)
- The userspace proxy now respects the IPTables proxy's minSyncInterval parameter. (#71735, @dcbw)
- iptables proxier: now routes local traffic to LB IPs to service chain (#77523, @andrewsykim)
- IPVS: Disabled graceful termination for UDP traffic to solve issues with high number of UDP connections (DNS / syslog in particular) (#77802, @lbernail)
- Fixed a bug where kube-proxy returns error due to existing ipset rules using a different hash type. (#77371, @andrewsykim)
- Fixed spurious error messages about failing to clean up iptables rules when using iptables 1.8. (#77303, @danwinship)
- Increased log level to 2 for IPVS graceful termination (#78395, @andrewsykim)
- kube-proxy: os exit when CleanupAndExit is set to true (#76732, @JieJhih)
- Kubernetes will now allow trailing dots in the externalName of Services of type ExternalName. (#78385, @thz)

Node

- The dockershim container runtime now accepts the `docker` runtime handler from a RuntimeClass. (#78323, @tallclair)
- The init container can now get its own field value as environment variable values using downwardAPI support. (#75109, @yuchengwu)
- UpdateContainerResources is no longer recorded as a `container_status` operation. It now uses the label `update_container` . (#75278, @Nessex)
- kubelet: fix fail to close kubelet->API connections on heartbeat failure when bootstrapping or client certificate rotation is disabled (#78016, @gaorong)
- Set selinux label at plugin socket directory (#73241, @vikaschoudhary16)
- Fixed detection of non-root image user ID.(#78261, @tallclair)
- Signal handling is now initialized within hyperkube commands that require it, such as apiserver and kubelet. (#76659, @S-Chan)
- The Kubelet now properly requests protobuf objects where they are supported from the apiserver, reducing load in large clusters. (#75602, @smarterclayton)

OpenStack

- You can now define a kubeconfig file for the OpenStack cloud provider. (#77415, @Fedosin)
- OpenStack user credentials can now be read from a secret instead of a local config file. (#75062, @Fedosin)

Release

- Removed hyperkube short aliases from source code because hyperkube docker image currently create these aliases. (#76953, @Rand01ph)

Scheduling

- Tolerations with the same key and effect will be merged into one that has the value of the latest toleration for best effort pods. (#75985, @ravisantoshgudimetla)
- Achieved 2X performance improvement on both required and preferred PodAffinity. (#76243, @Huang-Wei)
- Fixed a scheduler racing issue to ensure low priority pods are unschedulable on the node(s) where high priority pods have `NominatedNodeName` set to the node(s). (#77990, @Huang-Wei)

Storage

- Fixed issue with kubelet waiting on invalid devicepath on AWS (#78595, @gnufied)
- StorageOS volumes now show correct mount information (node and mount time) in the StorageOS administration CLI and UI. (#78522, @croomes)
- Fixed issue in Portworx volume driver causing controller manager to crash. (#76341, @harsh-px)
- For an empty regular file, `stat --printf %F` will now display `regular empty file` instead of `regular file`. (#62159, @dixudx)
- You can now have different operation names for different storage operations. This still prevents two operations on same volume from happening concurrently but if the operation changes, it resets the exponential backoff. (#75213, @gnufied)
- Reduced event spam for `AttachVolume` storage operation. (#75986, @mucahitkurt)
- Until this release, the iscsi plugin was waiting 10 seconds for a path to appear in the device list. However this timeout is not enough, or is less than the default device discovery timeout in most systems, which prevents certain devices from being discovered. This timeout has been raised to 30 seconds, which should help to avoid mount issues due to device discovery. (#78475, @humblec)
- Added a field to store CSI volume expansion secrets (#77516, @gnufied)
- Fixed a bug in block volume expansion. (#77317, @gnufied)
- Count PVCs that are unbound towards attach limit. (#73863, @gnufied)

VMware

- SAML token delegation (required for Zones support in vSphere) is now supported (#78876, @dougm)
- vSphere SAML token auth is now supported when using Zones (#75515, @dougm)

Windows

- Kubectl port-forward for Windows containers was added in v1.15. To use it, you'll need to build a new pause image including WinCAT. (#75479, @benmoss)
- We're working to simplify the Windows node join experience with better scripts and kubeadm. Scripts and doc updates are still in the works, but some of the needed improvements are included in 1.15. These include:
  - Windows kube-proxy will wait for HNS network creation on start (#78612, @ksubrmnn)
  - kubeadm: implemented CRI detection for Windows worker nodes (#78053, @ksubrmnn)
- Worked toward support for Windows Server version 1903, including adding Windows support for preserving the destination IP as the VIP when loadbalancing with DSR. (#74825, @ksubrmnn)
- Bug fix: Windows Kubelet nodes will now correctly search the default location for Docker credentials (`%USERPROFILE%\.docker\config.json`) when pulling images from a private registry. (https://kubernetes.io/docs/concepts/containers/images/#configuring-nodes-to-authenticate-to-a-private-registry) (#78528, @bclau)

Dependencies

Changed

- The default Go version was updated to 1.12.5. (#78528)
- cri-tools has been updated to v1.14.0. (#75658)
- Cluster Autoscaler has been updated to v1.15.0. (#78866)
- Kibana has been upgraded to v6.6.1. (#71251)
- CAdvisor has been updated to v0.33.2. (#76291)
- Fluentd-gcp-scaler has been upgraded to v0.5.2. (#76762)
- Fluentd in fluentd-elasticsearch has been upgraded to v1.4.2. (#76854)
- fluentd-elasticsearch has been updated to v2.5.2. (#76854)
- event-exporter has been updated to v0.2.5. (#77815)
- es-image has been updated to Elasticsearch 6.7.2. (#77765)
- metrics-server has been updated to v0.3.3. (#77950)
- ip-masq-agent has been updated to v2.4.1. (#77844)
- addon-manager has been updated to v9.0.1 (#77282)
- go-autorest has been updated to v11.1.2 (#77070)
- klog has been updated to 0.3.0 (#76474)
- k8s-dns-node-cache image has been updated to v1.15.1 (#76640, @george-angel)

Unchanged

- Default etcd server version remains unchanged at v3.3.10. The etcd client version was updated to v3.3.10. (#71615, #70168, #76917)
- The list of validated docker versions remains unchanged.
  - The current list is 1.13.1, 17.03, 17.06, 17.09, 18.06, 18.09. (#72823, #72831)
- CNI remains unchanged at v0.7.5. (#75455)
- CSI remains unchanged at to v1.1.0. (#75391)
- The dashboard add-on remains unchanged at v1.10.1. (#72495)
- kube-dns is unchanged at v1.14.13 as of Kubernetes 1.12. (#68900)
- Influxdb is unchanged at v1.3.3 as of Kubernetes 1.10. (#53319)
- Grafana is unchanged at v4.4.3 as of Kubernetes 1.10. (#53319)
- The fluent-plugin-kubernetes_metadata_filter plugin in fluentd-elasticsearch is unchanged at v2.1.6. (#71180)
- fluentd-gcp is unchanged at v3.2.0 as of Kubernetes 1.13. (#70954)
- OIDC authentication is unchanged at coreos/go-oidc v2 as of Kubernetes 1.10. (#58544)
- Calico is unchanged at v3.3.1 as of Kubernetes 1.13. (#70932)
- crictl on GCE was updated to v1.14.0. (#75658)
- CoreDNS is unchanged at v1.3.1 as of Kubernetes 1.14. (#78691)
- GLBC remains unchanged at v1.2.3 as of Kubernetes 1.12. (#66793)
- Ingress-gce remains unchanged at v1.2.3 as of Kubernetes 1.12. (#66793)
- v1.15.0-rc.1
- v1.15.0-beta.2
- v1.15.0-beta.1
- v1.15.0-alpha.3
- v1.15.0-alpha.2
- v1.15.0-alpha.1

v1.15.0-rc.1

Documentation

Downloads for v1.15.0-rc.1

filename	sha512 hash
kubernetes.tar.gz	45733de20d0e46a0937577912d945434fa12604bd507f7a6df9a28b9c60b7699f2f13f2a6b99b6cc2a8cf012391346c961deae76f5902274ea09ba17e1796c4d
kubernetes-src.tar.gz	63394dee48a5c69cecd26c2a8e54e6ed5c422a239b78a267c47b640f7c6774a68109179ebedd6bdb99bd9526b718831f754f75efed986dd01f8dea20988c498d

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	6af05492d75b4e2b510381dd7947afd104bf412cfcfff86ccf5ec1f1071928c6b100ea5baa4ce75641b50ca7f77e5130fb336674879faf69ee1bb036bbe5b2e9
kubernetes-client-darwin-amd64.tar.gz	72e4ac298a6fc0b64673243fd0e02fe8d51d534dca6361690f204d43ae87caaf09293ff2074c25422e69312debb16c7f0bc2b285578bd585468fe09d77c829c8
kubernetes-client-linux-386.tar.gz	06f96a3b48a92ec45125fbcff64ed13466be9c0aa418dfe64e158b7a122de4e50cf75fbee76830cfb6a9d46612f579c76edb84ab7d242b44ed9bee4b0286defb
kubernetes-client-linux-amd64.tar.gz	ba97ccad5c572e264bccf97c69d93d49f4da02512a7e3fbfa01d5569e15cca0f23bf4dd2fb3f3e89c1f6b3aa92654a51dc3e09334ef66cc2354c91cc1904ddd9
kubernetes-client-linux-arm.tar.gz	6155c5775ebe937dabcfeb53983358e269fb43396b15a170214be0b3f682f78b682845ca1d1abbf94139752f812d887914dfff85dcb41626886d85460b8ba1a3
kubernetes-client-linux-arm64.tar.gz	ff6ef9f14be3c01f700546d949cfb2da91400f93bc4c8d0dc82cea442bf20593403956ffbe7934daad42d706949167b28b5bcc89e08488bbc5fa0fdd7369b753
kubernetes-client-linux-ppc64le.tar.gz	09dbec3378130acd52aee71ba0ac7ad3942ac1b05f17886868bb499c32abd89ff277d2ac28da71962ba741a5ea2cae07b3dd5ace1fc8c4fa9ffc7f7e79dd62e4
kubernetes-client-linux-s390x.tar.gz	8f1c211ef5764c57965d3ca197c93f8dcd768f7eb0ee9d5524f0867a8650ef8da9c21dced739697e879ba131e71311cc7df323ee7664fb35b9ea7f0149a686e3
kubernetes-client-windows-386.tar.gz	4bea6bd88eb41c7c1f0d495da6d0c7f39b55f2ccbbc0939ccd97a470aeff637bf2b2a42f94553df5073cb762787622f2467fca8c17fcc7d92619cbc26f4c3c95
kubernetes-client-windows-amd64.tar.gz	235e83e4bcf9535fb41a5d18dae145545ca4a7703ec6f7d6b3d0c3887c6981bb8fd12c367db2ba0cae0297724c16330978d569b2bad131aea7e1efcebef6b6a4

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	7de5aa86903ae91e97ce3017d815ab944b2ce36b2a64b0d8222e49887013596d953c5e68fa30a3f6e8bc5973c4c247de490e6b3dd38ecdea17aa0d2dc7846841
kubernetes-server-linux-arm.tar.gz	05d42c2a72c7ec54adc4e61bccae842fbab3e6f4f06ac3123eb6449fe7828698eeff2f2a1bfb883f443bae1b8a97ec0703f1e6243e1a1a74d57bf383fcc007e2
kubernetes-server-linux-arm64.tar.gz	143152305c6b9a99d95da4e6ed479ab33b1c4a58f5386496f9b680bf7d601d87f5a0c4f9dce6aceb4d231bb7054ff5018666851192bd1db86b84bef9dedb1e01
kubernetes-server-linux-ppc64le.tar.gz	7cf9084939319cf9ab67989151dd3384ffb4eb2c2575c8654c3afac65cabe27f499349c4f48633dc15e0cdadb2bf540ef054b57eb8fbd375b63e4592cf57c5e9
kubernetes-server-linux-s390x.tar.gz	aaca5140e6bfeb67259d47e28da75da9a8f335ed4b61580d9f13061c4010a7739631cbb2aabbe3a9ec47023837ac2f06f7e005789f411d61c8248991a23c0982

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	ec53dc1eb78be6e80470c5606b515e6859a245136e6b19a6bbb1f18dbc0aa192858dcf77e913138ef09426fc064dd2be8f4252a9914a0a1b358d683888a316ff
kubernetes-node-linux-arm.tar.gz	369e6a6f1f989af3863bc645019448964f0f1f28ace15680a888bc6e8b9192374ad823602709cb22969574876a700a3ef4c1889a8443b1526d3ccb6c6257da25
kubernetes-node-linux-arm64.tar.gz	c3ffd6c293feec6739881bf932c4fb5d49c01698b16bf950d63185883fcadacc2b7875e9c390423927a3a07d52971923f6f0c4c084fd073585874804e9984ead
kubernetes-node-linux-ppc64le.tar.gz	edeafe6bf1deeee4dd0174bdd3a09ece5a9a895667fcf60691a8b81ba5f99ec905cf231f9ea08ed25d58ddf692e9d1152484a085f0cfa1226ebf4476e12ccd9e
kubernetes-node-linux-s390x.tar.gz	3d10142101327ee9a6d754488c3e9e4fd0b5f3a43f3ef4a19c5d9da993fbab6306443c8877160de76dfecf32076606861ea4eb44e66e666036196d5f3e0e44ad

kubernetes-node-windows-amd64.tar.gz	514d09f3936af68746fc11e3b83f82c744ddab1c8160b59cb1b42ea8417dc0987d71040f37f6591d4df92da24e438d301932d7ccd93918692672b6176dc4f77b

Changelog since v1.15.0-beta.2

Other notable changes

- Resolves spurious rollouts of workload controllers when upgrading the API server, due to incorrect defaulting of an alpha procMount field in pods (#78885, @liggitt)
- vSphere: allow SAML token delegation (required for Zones support) (#78876, @dougm)
- Update Cluster Autoscaler to 1.15.0; changelog: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.15.0 (#78866, @losipiuk)
- Revert the CoreDNS version to 1.3.1 (#78691, @rajansandeep)
- CRDs get support for x-kuberntes-int-or-string to allow faithful representation of IntOrString types in CustomResources. (#78815, @sttts)
- 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
- Fix issue with kubelet waiting on invalid devicepath on AWS (#78595, @gnufied)
- Fixed a spurious error where update requests to the status subresource of multi-version custom resources would complain about an incorrect API version. (#78713, @liggitt)
- Fix admission metrics histogram bucket sizes to cover 25ms to ~2.5 seconds. (#78608, @jpbetz)
- Revert Promotion of resource quota scope selector to GA (#78696, @ravisantoshgudimetla)

v1.15.0-beta.2

Documentation

Downloads for v1.15.0-beta.2

filename	sha512 hash
kubernetes.tar.gz	e6c98ae93c710bb655e9b55d5ae60c56001fefb0fce74c624c18a032b94798cdfdc88ecbb1065dc36144147a9e9a77b69fba48a26097d132e708ddedde2f90b5
kubernetes-src.tar.gz	c9666ddb858631721f15e988bb5c30e222f0db1c38a6d67721b9ddcfac870d5f2dd8fc399736c55117ba94502ffe7ab0bb5a9e390e18a05196b463184c42da56

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	084e37b2d5d06aab37b34aba012eb6c2bb4d33bef433bef0340e306def8fddcbffb487cd150379283d11c3fa35387596780a12e306c39359f9a59106de20e8eb
kubernetes-client-darwin-amd64.tar.gz	7319108bb6e7b28575d64dadc3f397de30eb6f4f3ae1bef2001a2e84f98cb64577ff1794c41e2a700600045272b4648cd201e434f27f0ec1fb23638b86a7cac1
kubernetes-client-linux-386.tar.gz	5c4c8993c3a57f08cf08232ce5f3ecd5a2acffe9f5bc779fd00a4042a2d2099cc5fcf07c40d3524439e2fd79ebaa52c64fa06866ff3146e27b4aafd8233a6c72
kubernetes-client-linux-amd64.tar.gz	607cd737c944d186c096d38bc256656b6226534c36ffcaab981df0a755e62fe7967649ff6d2e198348d1640302e799ab4de788bbeb297c1577e0b20f603f93c1
kubernetes-client-linux-arm.tar.gz	9a0aac4210c453311d432fab0925cb9b275efa2d01335443795c35e4d7dde22cbf3a2cee5f74e50c90d80b8f252ad818c4199f6019b87b57c18fa4ea50ff0408
kubernetes-client-linux-arm64.tar.gz	6f416001e9fb42e1720302a6a46cee94952a2a825281ac7c5d6cce549f81b36b78585228ecee0fe2de56afbf44605c36a0abf100d59f25c40352c8c2e44d1168
kubernetes-client-linux-ppc64le.tar.gz	4c0e4451b6bfd08cdb851ef8e68d5206cbd55c60a65bb95e2951ab22f2f2d4a15c653ad8638a64e96b5975102db0aa338c16cea470c5f57bdf43e56db9848351
kubernetes-client-linux-s390x.tar.gz	d5c47fe6e79e73b426881e9ee00291952d70c65bfbdb69216e84b86ddaf2ffe5dc9447ea94d07a91a479ed85850125103d4bd0aa2ecd98c503b57d9c2018a68d
kubernetes-client-windows-386.tar.gz	d906d737a90ca0287156e42569479c9918f89f9a02e6fb800ea250a8c2a7a4792372401ecb25a342eebc2a8270ec2ebb714764af99afae83e6fe4b6a71d23f5b
kubernetes-client-windows-amd64.tar.gz	7b0c9f14600bdfb77dc2935ba0c3407f7d5720a3a0b7ca9a18fe3fabb87a2279216cc56fa136116b28b4b3ade7f3d2cf6f3c8e31cf1809c0fe575c3b0635bca6

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	636ebe9044f0033e3eff310e781d395f31a871a53e322932f331d2496975148a415053d5f67ba4ecd562bf3c9f6e066518e6dc805e756f552a23ad370f1fb992
kubernetes-server-linux-arm.tar.gz	ff656458f1d19345538a4145b97821403f418a06503ef94f6c0d0662f671b54b37aedbce064dc14f2d293bb997b3c1dc77decdaf979d333bc8ba5beae01592e6
kubernetes-server-linux-arm64.tar.gz	a95199a2b2f81c38c6c14791668598986595bedd41c9e9b2e94add0e93c5d0132f975e7a9042ae7abd4aeefd70d6a63f06030f632ecabffa358f73a575c7733f
kubernetes-server-linux-ppc64le.tar.gz	856d949df9494576e2dbd3b99d8097e97e8c4d2d195404f8307285303ff94ab7de282b55cd01d00bdafce20fa060585c97a065828269e6386abca245e15b2730

kubernetes-server-linux-s390x.tar.gz	7215091725f742977120f2ee4f4bc504dcff75d7258b7e90fcb4e41a2527d6cfd914d621258bd9735c08c86f53100300878eb0bbc89e13990145b77fe55dcbe1

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	47b8c18afaa5f81b82a42309e95cf6b3f849db18bc2e8aeaaaa54ee219b5c412ba5c92276d3efe9c8fa4d10b7da1667fd7c8bede8f7a4bef9fe429ccadf910c3
kubernetes-node-linux-arm.tar.gz	64d5ad334f9448c3444cd90b0a6a7f07d83f4fb307e850686eb14b13f8926f832ef994c93341488dbc67750af9d5b922e0f6b9cc98316813fd1960c38c0a9f77
kubernetes-node-linux-arm64.tar.gz	62d1e7fb2f1f271ca349d29bc43f683e7025107d893e9741310634037 46bb58ce203166656985c1ff22a4eef4d6d5a3373a9f49bdf9a55ad883308aedbc33cfb
kubernetes-node-linux-ppc64le.tar.gz	215a2e3a40c88922427d73af3d38b6a2827c2a699a76fa7acf1a171814d36c0abec406820045ae3f33f88d087dc9ceee3b8d5e6b9c70e77fb8095d1b8aa0cf7d
kubernetes-node-linux-s390x.tar.gz	d75f2a2fb430e7e7368f456590698fe04930c623269ffba88dd546a45ac9dd1f08f007bef28b53d232da3636c44c8f5e8e4135d8fe32ffc1bcdd45a8db883e45
kubernetes-node-windows-amd64.tar.gz	c8eeb1d9ada781a97dc368d308fb040124f644225579f18bb41bff0f354d65ea9e90fa2d4a161826c93c05f689abd4f7971fa80ea533c88b5a828cfc6f5a0801

Changelog since v1.15.0-beta.1

Action Required

- ACTION REQUIRED: The deprecated flag --conntrack-max has been removed from kube-proxy. Users of this flag should switch to --conntrack-min and --conntrack-max-per-core instead. (#78399, @rikatz)
- ACTION REQUIRED: kubeadm: the mixture of "--config" and "--certificate-key" is no longer allowed. The InitConfiguration and JoinConfiguration objects now support the "certificateKey" field and this field should be used instead of the command line argument in case a configuration file is already passed. (#78542, @neolit123)
- ACTION REQUIRED: Azure cloud provider could now be configured by Kubernetes secrets and a new option `cloudConfigType` is introduced, whose candidate values are `file`, `secret` and `merge` (default is `merge`). Note that the secret is a serialized version of azure.json file with key cloud-config. And the secret name is azure-cloud-provider in kube-system namespace. To allow Azure cloud provider read this secret, the RBAC permission referred here should also be assigned to service account `kube-system:azure-cloud-provider`.(#78242, @feiskyer)

Other notable changes

- kube-up.sh scripts now disable the KubeletPodResources feature for Windows nodes, due to issue #78628. (#78668, @mtaufen)
- StorageOS volumes now show correct mount information (node and mount time) in the StorageOS administration CLI and UI. (#78522, @croomes)
- Horizontal Pod Autoscaling can now scale targets up even when one or more metrics are invalid/unavailable as long as one metric indicates a scale up should occur. (#78503, @gjtempleton)
- kubeadm: revert the CoreDNS version to 1.3.1 (#78545, @neolit123)
- Move online volume expansion to beta (#77755, @gnufied)
- Fixes a memory leak in Kubelet on Windows caused by not not closing containers when fetching container metrics (#78594, @benmoss)
- Windows kube-proxy will wait for HNS network creation on start (#78612, @ksubrmnn)
- Fix error handling for loading initCfg in kubeadm upgrade and apply (#78611, @odinuge)
- Route controller now respects rate limiting to the cloud provider on deletion, previously it was only for create. (#78581, @andrewsykim)
- Windows Kubelet nodes will now correctly search the default location for Docker credentials (`%USERPROFILE%.docker* Windows nodes on GCE now have the Windows firewall enabled by default. (#78507, @pjh)
- Added objectSelector to admission webhook configurations. objectSelector is evaluated the oldObject and newObject that would be sent to the webhook, and is considered to match if either object matches the selector. A null object (oldObject in the case of create, or newObject in the case of delete) or an object that cannot have labels (like a DeploymentRollback or a PodProxyOptions object) is not considered to match. Use the object selector only if the webhook is opt-in, because end users may skip the admission webhook by setting the labels. (#78505, @caesarxuchao)
- Deprecate kubelet cAdvisor json endpoints (#78504, @dashpole)
- Supports configure accessLogs for AWS NLB (#78497, @M00nF1sh)
- Till this release, iscsi plugin was waiting 10 seconds for a path to appear in the device list. However this timeout is not enough or less than default device discovery timeout in most of the systems which cause certain device to be not accounted for the volume. This timeout has been lifted to 30seconds from this release and it should help to avoid mount issues due to device discovery. (#78475, @humblec)
- Remove deprecated --pod/-p flag from kubectl exec. The flag has been marked as deprecated since k8s version v1.12 (#76713, @prksu)
- CustomResourceDefinition with invalid regular expression in the pattern field of OpenAPI v3 validation schemas are not considere structural. (#78453, @sttts)
- Fixed panic in kube-proxy when parsing iptables-save output (#78428, @luksa)
- Remove deprecated flag --cleanup-iptables from kube-proxy (#78344, @aramase)
- The storageVersionHash feature is beta now. "StorageVersionHash" is a field in the discovery document of each resource. It allows clients to detect if the storage version of that resource has changed. Its value must be treated as opaque by clients. Only equality comparison on the value is valid. (#78325, @caesarxuchao)
- Use zone from node for topology aware aws-ebs volume creation to reduce unnecessary cloud provider calls (#78276, @zhan849)
- Finalizer Protection for Service LoadBalancers is now added as Alpha (disabled by default). This feature ensures the Service resource is not fully deleted until the correlating load balancer resources are deleted. (#78262, @MrHohn)
- Introducing new semantic for metric "volume_operation_total_seconds" to be the end to end latency of volume provisioning/deletion. Existing metric "storage_operation_duration_seconds" will remain untouched however exposed to the following potential issues: (#78061, @yuxiangqian)
    - 1. for volume's provisioned/deleted via external provisioner/deleter, "storage_operation_duration_seconds" will NOT wait for the external operation to be done before reporting latency metric (effectively close to 0). This will be fixed by using "volume_operation_total_seconds" instead
    - 2. if there's a transient error happened during "provisioning/deletion", i.e., a volume is still in-use while a deleteVolume has been called, original "storage_operation_duration_seconds" will NOT wait until a volume has been finally deleted before reporting a not accurate latency metric. The newly implemented metric "volume_operation_total_seconds", however, wait util a provisioning/deletion operation has been fully executed.
    - Potential impacts:

    - If an SLO/alert has been defined based on "volume_operation_total_seconds", it might get violated because of the more accurate metric might be significantly larger than previously reported. The metric is defined to be a histogram and the new semantic could change the distribution.
- metrics added to kubelet endpoint 'metrics/probes': (#77975, @logicalhan)
    - process_start_time_seconds
- NodeLocal DNSCache graduating to beta. (#77887, @prameshj)
- Kubelet will attempt to use wincat.exe in the pause container for port forwarding when running on Windows (#75479, @benmoss)
- iptables proxier: route local traffic to LB IPs to service chain (#77523, @andrewsykim)
- When the number of jobs exceeds 500, cronjob should schedule without error. (#77475, @liucimin)
- Enable 3rd party device monitoring by default (#77274, @RenaudWasTaken)
- This change enables a user to specify a DataSource/Kind of type "PersistentVolumeClaim" in their PVC spec. This can then be detected by the external csi-provisioner and plugins if capable. (#76913, @j-griffith)
- proxy/transport: Support Content-Encoding: deflate (#76551, @JieJhih)
- Add --sort-by option to kubectl top command (#75920, @artmello)
- Introduce Topolgy into the runtimeClass API (#75744, @yastij)
- Kubelet plugin registration now has retry and exponential backoff logic for when registration of plugins (like CSI or device plugin) fail. (#73891, @taragu)
- Windows support for preserving the destination IP as the VIP when loadbalancing with DSR. (#74825, @ksubrmnn)
- Add NonPrempting field to the PriorityClass. (#74614, @denkensk)
- The kubelet only collects metrics for the node, container runtime, kubelet, pods, and containers. (#72787, @dashpole)
- Improved README for k8s.io/sample-apiserver (#73447, @MikeSpreitzer)
- kubeadm: flag "--experimental-control-plane" is now deprecated. use "--control-plane" instead (#78452, @fabriziopandini)
    - kubeadm: flag "--experimental-upload-certs" is now deprecated. use "--upload-certs" instead
- Promote resource quota scope selector to GA (#78448, @ravisantoshgudimetla)
- `kubectl scale job` , deprecated since 1.10, has been removed (#78445, @soltysh)
- CustomResourcesDefinition conversion via webhooks is promoted to beta. It requires that spec.preserveUnknownFields is set to false. (#78426, @sttts)
- kubeadm: a new command `kubeadm upgrade node` is introduced for upgrading nodes (both secondary control-plane nodes and worker nodes) (#78408, @fabriziopandini)
    - The command `kubeadm upgrade node config` is now deprecated; use `kubeadm upgrade node` instead.
    - The command `kubeadm upgrade node experimental-control-plane` is now deprecated; use `kubeadm upgrade node` instead.
- Increase log level to 2 for IPVS graceful termination (#78395, @andrewsykim)
- Add support for Azure File plugin to csi-translation-lib (#78356, @andyzhangx)
- refactor AWS NLB securityGroup handling (#74692, @M00nF1sh)
- Handle resize operation for volume plugins migrated to CSI (#77994, @gnufied)
- Inline CSI ephemeral volumes can now be controlled with PodSecurityPolicy when the CSIInlineVolume alpha feature is enabled (#76915, @vladimirvivien)
- Add support for Azure Disk plugin to csi-translation-lib (#78330, @andyzhangx)
- Ensures that the node-role.kubernetes.io/master taint is applied to the master with NoSchedule on GCE. (#78183, @cheftako)
- Add Post-bind extension point to the scheduling framework (#77567, @wgliang)
- Add CRD support for default values in OpenAPI v3 validation schemas. `default` values are set for object fields which are undefined in request payload and in data read from etcd. Defaulting is alpha and disabled by default, if the feature gate CustomResourceDefaulting is not enabled. (#77558, @sttts)
- kubeadm: v1beta2 InitConfiguration no longer embeds ClusterConfiguration it it. (#77739, @rosti)
- kube-apiserver: the `--enable-logs-handler` flag and log-serving functionality is deprecated, and scheduled to be removed in v1.19. (#77611, @rohitsardesai83)
- Fix vSphere SAML token auth when using Zones (#78137, @dougm)
- Admission webhooks can now register for a single version of a resource (for example, `apps/v1 deployments`) and be called when any other version of that resource is modified (for example `extensions/v1beta1 deployments`). This allows new versions of a resource to be handled by admission webhooks without needing to update every webhook to understand the new version. See the API documentation for the `matchPolicy: Equivalent` option in MutatingWebhookConfiguration and ValidatingWebhookConfiguration types. (#78135, @liggitt)
- Add `kubeadm alpha certs certificate-key` command to generate secure random key to use on `kubeadm init --experimental-upload-certs` (#77848, @yagonobre)
- IPVS: Disable graceful termination for UDP traffic to solve issues with high number of UDP connections (DNS / syslog in particular) (#77802, @lbernail)
- In CRD webhook conversion ignore changes to metadata other than for labels and annotations. (#77743, @sttts)
- Allow trailing dots in the externalName of Services of type ExternalName. (#78385, @thz)
- Fix a bug where kube-proxy returns error due to existing ipset rules using a different hash type. (#77371, @andrewsykim)
- kubeadm: implement CRI detection for Windows worker nodes (#78053, @ksubrmnn)

v1.15.0-beta.1

Documentation

Downloads for v1.15.0-beta.1

filename	sha512 hash
kubernetes.tar.gz	`c0dcbe90feaa665613a6a1ca99c1ab68d9174c5bcd3965ff9b8d9bad345dfa9e5eaa04a544262e3648438c852c5ce2c7ae34caecebefdb06091747a23098571c`
kubernetes-src.tar.gz	`b79bc690792e0fbc380e47d6708250211a4e742d306fb433a1b6b50d5cea79227d4e836127f33791fb29c9a228171cd48e11bead624c8401818db03c6dc8b310`

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	`b79ca71cf048515084cffd9459153e6ad4898f123fda1b6aa158e5b59033e97f3b4eb1a5563c0bfe4775d56a5dc58d651d5275710b9b250db18d60cc945ea992`
kubernetes-client-darwin-amd64.tar.gz	`699a76b03ad3d1a38bd7e1ffb7765526cc33fb40b0e7dc0a782de3e9473e0e0d8b61a876c0d4e724450c3f2a6c2e91287eefae1c34982c84b5c76a598fbbca2c`

kubernetes-client-linux-386.tar.gz	5fa8bc2cbd6c9f6a8c9fe3fa96cad85f98e2d21132333ab7068b73d2c7cd27a7ebe1384fef22fdfdb755f635554efca850fe154f9f272e505a5f594f86ffadff
kubernetes-client-linux-amd64.tar.gz	3dfbd496cd8bf9348fd2532f4c0360fe58ddfaab9d751f81cfbf9d9ddb8a347e004a9af84578aaa69bb8ee1f8cfc7adc5fd1864a32261dff94dd5a59e5f94c00
kubernetes-client-linux-arm.tar.gz	4abcac1fa5c1ca5e9d245e87ca6f601f7013b6a7e9a9d8dae7b322e62c8332e94f0ab63db71c0c2a535eb45bf2da51055ca5311768b8e927a0766ad99f727a72
kubernetes-client-linux-arm64.tar.gz	22e2d6fc8eb1f64528215901c7cc8a016dda824557667199b9c9d5478f163962240426ef2a518e3981126be82a1da01cf585b1bf08d9fd2933a370beaef8d766
kubernetes-client-linux-ppc64le.tar.gz	8d6f283020d76382e00b9e96f1c880654196aead67f17285ad1faf7ca7d1d2c2776e30deb9b67cee516f0efa8c260026925924ea7655881f9d75e9e5a4b8a9b7
kubernetes-client-linux-s390x.tar.gz	3320edd26be88e9ba60b5fbb326a0e42934255bb8f1c2774eb2d309318e6dbd45d8f7162d741b7b8c056c1c0f2b943dd9939bcdde2ada80c6d9de3843e35aefe
kubernetes-client-windows-386.tar.gz	951d1c9b2e68615b6f26b85e27895a6dfea948b7e4c566e27b11fde8f32592f28de569bb9723136d830548f65018b9e9df8bf29823828778796568bff7f38c36
kubernetes-client-windows-amd64.tar.gz	2f049941d3902b2915bea5430a29254ac0936e4890c742162993ad13a6e6e3e5b6a40cd3fc4cfd406c55eba5112b55942e6c85e5f6a5aa83d0e85853ccccb130

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	9049dc0680cb96245473422bb2c5c6ca8b1930d7e0256d993001f5de95f4c9980ded018d189b69d90c66a09af93152aa2823182ae0f3cbed72fb66a1e13a9d8c
kubernetes-server-linux-arm.tar.gz	38f08b9e78ea3cbe72b473cda1cd48352ee879ce0cd414c0decf2abce63bab6bdf8dc05639990c84c63faf215c581f580aadd1d73be4be233ff5c87b636184b9
kubernetes-server-linux-arm64.tar.gz	6cd0166162fc13c9d47cb441e8dd3ff21fae6d2417d3eb780b24ebcd615ac0841ec0602e746371dc62b8bddebf94989a7e075d96718c3989dc1c12adbe366cf9
kubernetes-server-linux-ppc64le.tar.gz	79570f97383f102be77478a4bc19d0d2c2551717c5f37e8aa159a0889590fc2ac0726d4899a0d9bc33e8c9e701290114222c468a76b755dc2604b113ab992ef3
kubernetes-server-linux-s390x.tar.gz	7e1371631373407c3a1b231d09610d1029d1981026f02206a11fd58471287400809523b91de578eb26ca77a7fe4a86dcc32e225c797642733188ad043600f82e

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	819bc76079474791d468a2945c9d0858f066a54b54fcc8a84e3f9827707d6f52f9c2abcf9ea7a2dd3f68852f9bd483b8773b979c46c60e5506dc93baab3bb067
kubernetes-node-linux-arm.tar.gz	1054e793d5a38ac0616cc3e56c85053beda3f39bc3dad965d73397756e3d78ea07d1208b0fdd5f8e9e6a10f75da017100ef6b04fdb650983262eaad682d84c38
kubernetes-node-linux-arm64.tar.gz	8357b8ee1ff5b2705fea1f70fdb3a10cb09ed1e48ee0507032dbadfb68b44b3c11c0c796541e6e0bbf010b20040871ca91f8edb4756d6596999092ca4931a540
kubernetes-node-linux-ppc64le.tar.gz	cf62d7a660dd16ee56717a786c04b457478bf51f262fefa2d1500035ccf5bb7cc605f16ef331852f5023671d61b7c3ef348c148288c5c41fb4e309679fa51265
kubernetes-node-linux-s390x.tar.gz	60f3eb8bfe3694f5def28661c62b67a56fb5d9efad7cfeb5dc7e76f8a15be625ac123e8ee0ac543a4464a400fca3851731d41418409d385ef8ff99156b816b0c
kubernetes-node-windows-amd64.tar.gz	66fb625fd68a9b754e63a3e1369a21e6d2116120b5dc5aae837896f21072ce4c03d96507b66e6a239f720abcf742adef6d06d85e19bebf935d4927cccdc6817d

Changelog since v1.15.0-alpha.3

Action Required

- ACTION REQUIRED: Deprecated Kubelet security controls AllowPrivileged, HostNetworkSources, HostPIDSources, HostIPCSources have been removed. Enforcement of these restrictions should be done through admission control instead (e.g. PodSecurityPolicy). (#77820, @dims)
  - ACTION REQUIRED: The deprecated Kubelet flag `--allow-privileged` has been removed. Remove any use of `--allow-privileged` from your kubelet scripts or manifests.
- Fix public IPs issues when multiple clusters are sharing the same resource group. (#77630, @feiskyer)
  - action required:
    - If the cluster is upgraded from old releases and the same resource group would be shared by multiple clusters, please recreate those LoadBalancer services or add a new tag 'kubernetes-cluster-name: ' manually for existing public IPs.
    - For multiple clusters sharing the same resource group, they should be configured with different cluster name by `kube-controller-manager --cluster-name=<cluster-name>`

Other notable changes

- fix azure retry issue when return 2XX with error (#78298, @andyzhangx)

- The dockershim container runtime now accepts the `docker` runtime handler from a RuntimeClass. (#78323, @tallclair)
- GCE: Disable the Windows defender to work around a bug that could cause nodes to crash and reboot (#78272, @yujuhong)
- The CustomResourcePublishOpenAPI feature is now beta and enabled by default. CustomResourceDefinitions with structural schemas now publish schemas in the OpenAPI document served at `/openapi/v2`. CustomResourceDefinitions with non-structural schemas have a `NonStructuralSchema` condition added with details about what needs to be corrected in the validation schema. (#77825, @roycaihw)
- kubeadm's ignored pre-flight errors can now be configured via InitConfiguration and JoinConfiguration. (#75499, @marccarre)
- Fix broken detection of non-root image user ID (#78261, @tallclair)
- kubelet: fix fail to close kubelet->API connections on heartbeat failure when bootstrapping or client certificate rotation is disabled (#78016, @gaorong)
- remove vmsizelist call in azure disk GetVolumeLimits which happens in kubelet finally (#77851, @andyzhangx)
- reverts an aws-ebs volume provisioner optimization as we need to further discuss a viable optimization (#78200, @zhan849)
- API changes and deprecating the use of special annotations for Windows GMSA support (version beta) (#75459, @wk8)
- apiextensions: publish (only) structural OpenAPI schemas (#77554, @sttts)
- Set selinux label at plugin socket directory (#73241, @vikaschoudhary16)
- Fix a bug that causes DaemonSet rolling update to hang when its pod gets stuck at terminating. (#77773, @DaiHao)
- Kubeadm: a new command `kubeadm alpha certs check-expiration` was created in order to help users in managing expiration for local PKI certificates (#77863, @fabriziopandini)
- kubeadm: fix a bug related to volume unmount if the kubelet run directory is a symbolic link (#77507, @cuericlee)
- n/a (#78059, @figo)
- Add configuration options for the scheduling framework and its plugins. (#77501, @JieJhih)
- Publish DeleteOptions parameters for deletecollection endpoints in OpenAPI spec (#77843, @roycaihw)
- CoreDNS is now version 1.5.0 (#78030, @rajansandeep)
  - A `ready` plugin has been included to report pod readiness
  - The `proxy` plugin has been deprecated. The `forward` plugin is to be used instead.
  - CoreDNS fixes the logging now that kubernetes' client lib switched to klog from glog.
- Upgrade Azure network API version to 2018-07-01, so that EnableTcpReset could be enabled on Azure standard loadbalancer (SLB). (#78012, @feiskyer)
- Fixed a scheduler racing issue to ensure low priority pods to be unschedulable on the node(s) where high priority pods have `NominatedNodeName` set to the node(s). (#77990, @Huang-Wei)
- Support starting Kubernetes on GCE using containerd in COS and Ubuntu with `KUBE_CONTAINER_RUNTIME=containerd`. (#77889, @Random-Liu)
- DelayingQueue.ShutDown() is now able to be invoked multiple times without causing a closed channel panic. (#77170, @smarterclayton)
- For admission webhooks registered for DELETE operations on k8s built APIs or CRDs, the apiserver now sends the existing object as admissionRequest.Request.OldObject to the webhook. (#76346, @caesarxuchao)
  - For custom apiservers they uses the generic registry in the apiserver library, they get this behavior automatically.
- Expose CSI volume stats via kubelet volume metrics (#76188, @humblec)
- Active watches of custom resources now terminate properly if the CRD is modified. (#78029, @liggitt)
- Add CRD spec.preserveUnknownFields boolean, defaulting to true in v1beta1 and to false in v1 CRDs. If false, fields not specified in the validation schema will be removed when sent to the API server or when read from etcd. (#77333, @sttts)
- Updates that remove remaining `metadata.finalizers` from an object that is pending deletion (non-nil metadata.deletionTimestamp) and has no graceful deletion pending (nil or 0 metadata.deletionGracePeriodSeconds) now results in immediate deletion of the object. (#77952, @liggitt)
- Deprecates the kubeadm config upload command as it's replacement is now graduated. Please see `kubeadm init phase upload-config` (#77946, @Klaven)
- k8s.io/client-go/dynamic/dynamicinformer.NewFilteredDynamicSharedInformerFactory now honours namespace argument (#77945, @michaelfig)
- `kubectl rollout restart` now works for daemonsets and statefulsets. (#77423, @apelisse)
- Fix incorrect azuredisk lun error (#77912, @andyzhangx)
- Kubelet could be run with no Azure identity now. A sample cloud provider configure is: `{"vmType": "vmss", "useInstanceMetadata": true}` (#77906, @feiskyer)
- client-go and kubectl no longer write cached discovery files with world-accessible file permissions (#77874, @yuchengwu)
- kubeadm: expose the kubeadm reset command as phases (#77847, @yagonobre)
- kubeadm: kubeadm alpha certs renew --csr-only now reads the current certificates as the authoritative source for certificates attributes (same as kubeadm alpha certs renew) (#77780, @fabriziopandini)
- Support "queue-sort" extension point for scheduling framework (#77529, @draveness)
- Allow init container to get its own field value as environment variable values(downwardAPI spport) (#75109, @yuchengwu)
- The metric `kube_proxy_sync_proxy_rules_last_timestamp_seconds` is now available, indicating the last time that kube-proxy successfully applied proxying rules. (#74027, @squeed)
- Fix panic logspam when running kubelet in standalone mode. (#77888, @tallclair)
- consume the AWS region list from the AWS SDK instead of a hard-coded list in the cloud provider (#75990, @mcrute)
- Add `Option` field to the admission webhook `AdmissionReview` API that provides the operation options (e.g. `DeleteOption` or `CreateOption`) for the operation being performed. (#77563, @jpbetz)
- Fix bug where cloud-controller-manager initializes nodes multiple times (#75405, @tghartland)
- Fixed a transient error API requests for custom resources could encounter while changes to the CustomResourceDefinition were being applied. (#77816, @liggitt)
- Fix kubectl exec usage string (#77589, @soltysh)
- CRD validation schemas should not specify `metadata` fields other than `name` and `generateName`. A schema will not be considered structural (and therefore ready for future features) if `metadata` is specified in any other way. (#77653, @sttts)
- Implement Permit extension point of the scheduling framework. (#77559, @ahg-g)
- 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)
- add operation name for vm/vmss update operations in prometheus metrics (#77491, @andyzhangx)
- fix incorrect prometheus azure metrics (#77722, @andyzhangx)
- Clients may now request that API objects are converted to the `v1.Table` and `v1.PartialObjectMetadata` forms for generic access to objects. (#77448, @smarterclayton)
- ingress: Update in-tree Ingress controllers, examples, and clients to target networking.k8s.io/v1beta1 (#77617, @cmluciano)
- util/initsystem: add support for the OpenRC init system (#73101, @oz123)
- Signal handling is initialized within hyperkube commands that require it (apiserver, kubelet) (#76659, @S-Chan)
- Fix some service tags not supported issues for Azure LoadBalancer service (#77719, @feiskyer)
- Add Un-reserve extension point for the scheduling framework. (#77598, @danielqsj)

- Once merged, `legacy cloud providers` unit tests will run as part of ci, just as they were before they move from `./pkg/cloudproviders/providers` (#77704, @khenidak)
- Check if container memory stats are available before accessing it (#77656, @yastij)
- Add a field to store CSI volume expansion secrets (#77516, @gnufied)
- Add a condition NonStructuralSchema to CustomResourceDefinition listing Structural Schema violations as defined in KEP https://github.com/kubernetes/enhancements/blob/master/keps/sig-api-machinery/20190425-structural-openapi.md. CRD authors should update their validation schemas to be structural in order to participate in future CRD features. (#77207, @sttts)
- Update to use go 1.12.5 (#77528, @cblecker)
- Fix race conditions for Azure loadbalancer and route updates. (#77490, @feiskyer)
- remove VM API call dep in azure disk WaitForAttach (#77483, @andyzhangx)
- N/A (#77425, @figo)
- Fix TestEventChannelFull random fail (#76603, @changyaowei)
- `aws-cloud-provider` service account in the `kube-system` namespace need to be granted with list node permission with this optimization (#76976, @zhan849)
- Remove hyperkube short aliases from source code, Because hyperkube docker image currently create these aliases. (#76953, @Rand01ph)
- Allow to define kubeconfig file for OpenStack cloud provider. (#77415, @Fedosin)
- API servers using the default Google Compute Engine bootstrapping scripts will have their insecure port (`:8080`) disabled by default. To enable the insecure port, set `ENABLE_APISERVER_INSECURE_PORT=true` in kube-env or as an environment variable. (#77447, @dekkagaijin)
- GCE clusters will include some IP ranges that are not in used on the public Internet to the list of non-masq IPs. (#77458, @grayluck)
  - Bump ip-masq-agent version to v2.3.0 with flag `nomasq-all-reserved-ranges` turned on.
- Implement un-reserve extension point for the scheduling framework. (#77457, @danielqsj)
- If a pod has a running instance, the stats of its previously terminated instances will not show up in the kubelet summary stats any more for CRI runtimes like containerd and cri-o. (#77426, @Random-Liu)
  - This keeps the behavior consistent with Docker integration, and fixes an issue that some container Prometheus metrics don't work when there are summary stats for multiple instances of the same pod.
- Limit use of tags when calling EC2 API to prevent API throttling for very large clusters (#76749, @mcrute)
- When specifying an invalid value for a label, it was not always clear which label the value was specified for. Starting with this release, the label's key is included in such error messages, which makes debugging easier. (#77144, @kenegozi)

v1.15.0-alpha.3

Documentation

Downloads for v1.15.0-alpha.3

filename	sha512 hash
kubernetes.tar.gz	88d9ced283324136e9230a0c92ad9ade10d1f52d095d5a3f9827a1ebe0cf87b5edf713cff9093cc5c61311282fe861b7c02d1da62a6ba74e2c19584e5d6084a6
kubernetes-src.tar.gz	c6cfe656825da66e863cd08887b3ce4374e3dae0448e33c77f960aec168c1cbad46e2485ddb9dc00f0733b4464f1e8c6e20f333097f43848decc07576ffb8d69

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	9df574b99dd03b15c784afa0bf91e826d687c5a2c7279878ddc9489e5542b2b24da5dc876eb01da0182dd4dabfda3b427875dcde16a99478923e9f74233640c1
kubernetes-client-darwin-amd64.tar.gz	bd8ac74d57e2c5dbfb36a8a3f79802a85393d914c0f513f83395f4b951a41d58ef23081d67edd1dacc039ef29bc761dcd17787b3315954f7460e15a15150dd5e
kubernetes-client-linux-386.tar.gz	8ffecc41f973564b18ee6ee0cf3d2c553e9f4649b13e99dc92f427a3861b04c599e94b14ecab8b3f6018cc1248dec72cd0318c41a5d51364961cf14c8667b89c
kubernetes-client-linux-amd64.tar.gz	8c62df3e8f02d0fe6388f82cf3af32c592783a012744b0595e5ae66097643dc6e28171322d69c1cd7e30c6b411f6f2b727728a503aec8f9d0c7cfdee44f307f5
kubernetes-client-linux-arm.tar.gz	6e411c605778e2a079971bfe6f066bd834dcaa13a6e1369d1a5064cc16a95aee8e6b07197522e4ef83d40692869dbd1b082a784102cad8168375202db773ce80
kubernetes-client-linux-arm64.tar.gz	52daf658b97c66bf67b24ad45adf27e70cf8e721e616250bef06c8d4d4b6e0820647b337c38eec2673d440c2578989ba1ca1d24b4babeb7c0e22834700c225d5
kubernetes-client-linux-ppc64le.tar.gz	0f2fe4d16518640a958166bc9e1963d594828e6edfa37c018778ccce79761561d0f9f8db206bd4ed122ce068d74e10cd25655bb6763fb0d53c881f0199db09bf
kubernetes-client-linux-s390x.tar.gz	58582b030c95160460f7061000c19da225d175249beff26d4a3f5d415670ff374781b4612e1b8e01e86d31772e4ab86cd41553885d514f013df9c01cbda4b7c2
kubernetes-client-windows-386.tar.gz	d2898a2e2c6d28c9069479b7dfcf5dc640864e20090441c9bb101e3f6a1cbc28051135b60143dc6b8f1edaa896e8467d3c1b7bbd7b75a3f1fb3657da6eb7385d
kubernetes-client-windows-amd64.tar.gz	50fa515ba4be8a30739cb811d8750260f2746914b98de9989c58e9b100d07f59a9b701d83a06646ccf3ad53c74b8a7a35c9eb860fb0cff27178145f457921c1b

Server Binaries

filename	sha512 hash
kubernetes-server-linux-	b124b2fa18935bbc15b9a3c0447df931314b41d36d2cd9a65bebd090dafec9bc8f3614bf0fca97504d9d5270580b0e5e3f8564a7c8d87fde57cd593b73a7697d

amd64.tar.gz	
kubernetes-server-linux-arm.tar.gz	cde20282adb8d43e350c932c5a52176c2e1accb80499631a46c6d6980c1967c324a77e295a14eb0e37702bcd26462980ac5fe5f1ee689386d974ac4c28d7b462
kubernetes-server-linux-arm64.tar.gz	657b24b24dddb475a737be8e65669caf3c41102de5feb990b8b0f29066f823130ff759b1579a6ddbb08fef1e75edca3621054934253ef9d636f4bbcc255093ea
kubernetes-server-linux-ppc64le.tar.gz	2373012c73109a38a6a2b64f1db716d62a65a4a64ccf246680f226dba96b598f9757ded4e2d3581ba4f499a28e7d8d89bbc0db98a09c812fdc7e12a014fb70ec
kubernetes-server-linux-s390x.tar.gz	c2ce4362766bb08ffccea13893431c5f59d02f996fbb5fad1fe0014a9670440dca9e9ab4037116e19f090eeba9bdbb2ff8d2e80128afe29a86adb043a7c4e674

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	c26b0b2fff310d791c91e610252a86966df271b745a3ded8067328dab04fd3c1600bf1f67d728521472fbba067be2a2a52c927c6af4ae6cbabf237f74843b5dd
kubernetes-node-linux-arm.tar.gz	79e70e550a401435b0f3d06b60312bc0740924ca56607eae9cd0d12dce1a6ea1ade1a850145ba05fccec1f52eb6879767e901b6fe2e7b499cf4c632d9ebae017
kubernetes-node-linux-arm64.tar.gz	5f920cf9e169c863760a27022f3f0e1503cedcb6b84089a7e77a05d2d449a9a68f23f1ea48924acc8221e78f151e832e07cbb5586e6e652c56c2fd6ff6009551
kubernetes-node-linux-ppc64le.tar.gz	6037b555f484337e659b347ce0ca725e0a25e2e3034100a9ebc4c18668eb102093e8477cca8022cd99957a4532034ad0b7d1cf356c0bb6582f8acf9895e46423
kubernetes-node-linux-s390x.tar.gz	a32a0a22ade7658e5fb924ca8b0ccca40e96f872d136062842c046fd3f17ecc056c22d6cfa3736cbbbac3b648299ef976ad6811ed942e13af3185d83e3440d97
kubernetes-node-windows-amd64.tar.gz	005120b6500ee9839a6914a08ec270ccd273b5dea863da17d4da5ab1e47a7dee5b174cf5d923870186d144b954778d26e3e4445dc997411f267b200001e13e03

Changelog since v1.15.0-alpha.2

Other notable changes

- Adding ListMeta.RemainingItemCount. When responding a LIST request, if the server has more data available, and if the request does not contain label selectors or field selectors, the server sets the ListOptions.RemainingItemCount to the number of remaining objects. (#75993, @caesarxuchao)
- This PR removes unused soak test cauldron (#77335, @logutus)
- N/A (#76966, @figo)
- kubeadm: kubeadm alpha certs renew and kubeadm upgrade now supports renews of certificates embedded in KubeConfig files managed by kubeadm; this does not apply to certificates signed by external CAs. (#77180, @fabriziopandini)
- As of Kubernetes 1.15, the SupportNodePidsLimit feature introduced as alpha in Kubernetes 1.14 is now beta, and the ability to utilize it is enabled by default. It is no longer necessary to set the feature gate `SupportNodePidsLimit=true`. In all other respects, this functionality behaves as it did in Kubernetes 1.14. (#76221, @RobertKrawitz)
- Bump addon-manager to v9.0.1 (#77282, @MrHohn)
  - Rebase image on debian-base:v1.0.0
- Fix kubectl describe CronJobs error of `Successful Job History Limit`. (#77347, @danielqsj)
- Remove extra pod creation exceptions when daemonset fails to create pods in batches. (#74856, @draveness)
- enhance the daemonset sync logic in clock-skew scenario (#77208, @DaiHao)
- GCE-only flag `cloud-provider-gce-lb-src-cidrs` becomes optional for external cloud providers. (#76627, @timoreimann)
- The GCERegionalPersistentDisk feature gate (GA in 1.13) can no longer be disabled. The feature gate will be removed in v1.17. (#77412, @liggitt)
- API requests rejected by admission webhooks which specify an http status code < 400 are now assigned a 400 status code. (#77022, @liggitt)
- kubeadm: Add ability to specify certificate encryption and decryption key for the upload/download certificates phases as part of the new v1beta2 kubeadm config format. (#77012, @rosti)
- Fixes incorrect handling by kubectl of custom resources whose Kind is "Status" (#77368, @liggitt)
- kubeadm: disable the kube-proxy DaemonSet on non-Linux nodes. This step is required to support Windows worker nodes. (#76327, @neolit123)
- Add etag for NSG updates so as to fix nsg race condition (#77210, @feiskyer)
- The `series.state` field in the events.k8s.io/v1beta1 Event API is deprecated and will be removed in v1.18 (#75987, @yastij)
- API paging is now enabled by default in k8s.io/apiserver recommended options, and in k8s.io/sample-apiserver (#77278, @liggitt)
- GCE/Windows: force kill Stackdriver logging processes when the service cannot be stopped (#77378, @yujuhong)
- ingress objects are now persisted in etcd using the networking.k8s.io/v1beta1 version (#77139, @cmluciano)
- [fluentd-gcp addon] Bump fluentd-gcp-scaler to v0.5.2 to pick up security fixes. (#76762, @serathius)
- Add RuntimeClass restrictions & defaulting to PodSecurityPolicy. (#73795, @tallclair)
- Promote meta.k8s.io/v1beta1 Table and PartialObjectMetadata to v1. (#77136, @smarterclayton)
- Fix bug with block volume expansion (#77317, @gnufied)
- Fixes spurious error messages about failing to clean up iptables rules when using iptables 1.8. (#77303, @danwinship)
- Add TLS termination support for NLB (#74910, @M00nF1sh)
- Preserves existing namespace information in manifests when running `kubectl set ... --local` commands (#77267, @liggitt)
- fix issue that pull image failed from a cross-subscription Azure Container Registry when using MSI to authenticate (#77245, @norshtein)
- Clean links handling in cp's tar code (#76788, @soltysh)
- Implement and update interfaces and skeleton for the scheduling framework. (#75848, @bsalamat)
- Fixes segmentation fault issue with Protobuf library when log entries are deeply nested. (#77224, @qingling128)
- kubeadm: support sub-domain wildcards in certificate SANs (#76920, @sempr)
- Fixes an error with stuck informers when an etcd watch receives update or delete events with missing data (#76675, @ryanmcnamara)

v1.15.0-alpha.2

Documentation

Downloads for v1.15.0-alpha.2

filename	sha512 hash
kubernetes.tar.gz	88ca590c9bc2a095492310fee73bd191398375bc7f549e66e8978c48be8a9c0f9ad26e3881b84d5f2f2e49273333b3086dd99cc8c52de68e38464729f0d2828f
kubernetes-src.tar.gz	f587073d7b58903a52beeaa911c932047294be54b6f395063c65b46a61113af1aeca37c0edc536525398f0051968708cc9bb17a2173edb8c2e8f3938ad91c0b0

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	1b944693f3813702e64f41fc11102af59beceb5ded52aac3109ebe39eb2e9103d10b26f29519337a36c86dec5c472d2b0dd5bb0264969a587345b6bb89142520
kubernetes-client-darwin-amd64.tar.gz	233bba8324f7570e527f7ef22a01552c28dbabc6eef658311668ed554923344791c2c9314678f205424a638fefebbbf67dd32be99cb70019cc77a08dbae08f4d
kubernetes-client-linux-386.tar.gz	1203729b3180328631d4192c5f4cfb09e3fea958be544fe4ee3e86826422a6242d7eae9d3efba055ada4e65dbc7a3020305da97223d24416dd40686271fb3537
kubernetes-client-linux-amd64.tar.gz	ad0613c88d4f97b2a8f35fff607bf6168724b28838587218ccece14afb52b531f723ced372de3a4014ee76ae2c738f523790178395a2b59d4b5f53fc3451fd04
kubernetes-client-linux-arm.tar.gz	e9d3905d306504838d417051df43431f724ea689fd3564e575f8235fc80d771b9bc72c98eae4641e9e3c5619fc93550b93634ff33d8db3b0058e348d7258ee3d
kubernetes-client-linux-arm64.tar.gz	a426b27d0851d84b76d225b9366668521441539e7582b2439e973c98c84909fc0a236478d505c6cf50598c4ecb4796f3214ee5c80d42653ddb8e30d5ce7732be
kubernetes-client-linux-ppc64le.tar.gz	be717777159b6f0c472754be704d543b80168cc02d76ca936f6559a55752530e061fe311df3906660dcaf7950a7cbea102232fb54bc4056384c11018d1dfff24
kubernetes-client-linux-s390x.tar.gz	4a4a08d23be247e1543c85895c211e9fee8e8fa276e5aa31ed012804fa0921eeb0e5828f8ef152742b41dc1db08658dec01c0287b2828c3d3b91f260243c2457
kubernetes-client-windows-386.tar.gz	8d16d655d7d4213a45a583f81b31056a02dd2100d06d8072a8ec77e255630bd9acfff062d7ab46946f94d667a8d73c6118184454646 38f3a3ef69c29e9aafda7
kubernetes-client-windows-amd64.tar.gz	d4ece03464aaa9c2416d7acf9de7f94f3e01fa17f6f7469a9aedaefa90d4b0af193a1b78fb514fd9de0a55a45244a076e3897e62f9208581523690bbe0353357

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	932557827bfcc329162fcf29510f40951bdd5da4890de62fd5c44d5290349b0942ffe07bb2b518ca0f21b4de4c27ec6cfa338ec2b40e938e3a9f6e3ab5db89c0
kubernetes-server-linux-arm.tar.gz	e1c5349feab83ad458b9a5956026c48c7ce53f3becc09c537eda8984cea56bb254e7972d467e3b3349ad8e35cf70bebcb4b6a0ab98cbe43ab5f1238f0844d151
kubernetes-server-linux-arm64.tar.gz	e8cfe09ff625b36b58d97440d82dbc06795d503729b45a8d077de7c73b70f350010747ad2c118ea75946e40cbf5cdfb1fdfa686c8cc714d4ec942f9bf2925664
kubernetes-server-linux-ppc64le.tar.gz	99770fe0abd0ec2d5f7e38d434a82fa323b2e25124e62aadf483dd68e763b07292e9303a2c8d96964bed91cab7050e0f5be02c76919c33dcc18b46d541677022
kubernetes-server-linux-s390x.tar.gz	3f0772f3b470d59330dd6b44a43af640a7ec42354d734a1aef491769d20a2dadaebda71cac6ad926082e03e967c6dd16ce9c440183d705c8c7c5a33f6d7b89be

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	9c879a12174a8c69124a649a8e6d51a5d4c174741d743f68f9ccec349aa671ca085e33cf63ba6047e89c9e16c2122758bbcac01eba48864cd834d18ff6c6bd36
kubernetes-node-linux-arm.tar.gz	3ac31c7f6b01896da60028037f30f8b6f331b7cd989dcfabd5623dbfbbed8a60ff5911fc175d976e831075587f2cd79c97f50b5cfa73bac203746bd2f6b75cd1
kubernetes-node-linux-arm64.tar.gz	669376d5673534d53d2546bc7768f00a3add74da452061dbc2892f59efba28dc54835e4bc556c84ef54cb761f9e65f2b54e274f39faa0d609976da76fcdd87df
kubernetes-node-linux-ppc64le.tar.gz	b1c7fb9fcafc216fa2bd9551399f11a592922556dfad4c56fa273a7c54426fbb63b786ecf44d71148f5c8bd08212f9915c0b784790661302b9953d6da44934d7
kubernetes-node-linux-s390x.tar.gz	b93ae8cebd79d1ce0cb2aed66ded63b3541fcca23a1f879299c422774fb757ad3c30e782ccd7314480d247a5435c434014ed8a4cc3943b3078df0ef5b5a5b8f1

kubernetes-node-windows-amd64.tar.gz	e99127789e045972d0c52c61902f00297c208851bb65e01d28766b6f9439f81a56e48f3fc1a20189c59ea76d3ba4ac3dd230ad054c8a2106ae8a19d4232137ba

Changelog since v1.15.0-alpha.1

Other notable changes

- Kubemark scripts have been fixed for IKS clusters. (#76909, @Huang-Wei)
- fix azure disk list corruption issue (#77187, @andyzhangx)
- kubeadm: kubeadm upgrade now renews all the certificates used by one component before upgrading the component itself, with the exception of certificates signed by external CAs. User can eventually opt-out from certificate renewal during upgrades by setting the new flag --certificate-renewal to false. (#76862, @fabriziopandini)
- kube-proxy: os exit when CleanupAndExit is set to true (#76732, @JieJhih)
- kubectl exec now allows using resource name (e.g., deployment/mydeployment) to select a matching pod. (#73664, @prksu)
  - kubectl exec now allows using --pod-running-timeout flag to wait till at least one pod is running.
- kubeadm: add optional ECDSA support. (#76390, @rojkov)
  - kubeadm still generates RSA keys when deploying a node, but also accepts ECDSA
  - keys if they exist already in the directory specified in --cert-dir option.
- kube-proxy: HealthzBindAddress and MetricsBindAddress support ipv6 address. (#76320, @JieJhih)
- Packets considered INVALID by conntrack are now dropped. In particular, this fixes a problem where spurious retransmits in a long-running TCP connection to a service IP could result in the connection being closed with the error "Connection reset by peer" (#74840, @anfernee)
- Introduce the v1beta2 config format to kubeadm. (#76710, @rosti)
- kubeadm: bump the minimum supported Docker version to 1.13.1 (#77051, @chenzhiwei)
- Rancher credential provider has now been removed (#77099, @dims)
- Support print volumeMode using `kubectl get pv/pvc -o wide` (#76646, @cwdsuzhou)
- Upgrade go-autorest to v11.1.2 (#77070, @feiskyer)
- Fixes a bug where dry-run is not honored for pod/eviction sub-resource. (#76969, @apelisse)
- Reduce event spam for AttachVolume storage operation (#75986, @mucahitkurt)
- Report cp errors consistently (#77010, @soltysh)
- specify azure file share name in azure file plugin (#76988, @andyzhangx)
- Migrate oom watcher not relying on cAdviosr's API any more (#74942, @WanLinghao)
- Validating admission webhooks are now properly called for CREATE operations on the following resources: tokenreviews, subjectaccessreviews, localsubjectaccessreviews, selfsubjectaccessreviews, selfsubjectrulesreviews (#76959, @sbezverk)
- Fix OpenID Connect (OIDC) token refresh when the client secret contains a special character. (#76914, @tsuna)
- kubeadm: Improve resiliency when it comes to updating the `kubeadm-config` config map upon new control plane joins or resets. This allows for safe multiple control plane joins and/or resets. (#76821, @ereslibre)
- Validating admission webhooks are now properly called for CREATE operations on the following resources: pods/binding, pods/eviction, bindings (#76910, @liggitt)
- Default TTL for DNS records in kubernetes zone is changed from 5s to 30s to keep consistent with old dnsmasq based kube-dns. The TTL can be customized with command `kubectl edit -n kube-system configmap/coredns` . (#76238, @Dieken)
- Fixed a kubemark panic when hollow-node is morphed as proxy. (#76848, @Huang-Wei)
- k8s-dns-node-cache image version v1.15.1 (#76640, @george-angel)
- GCE/Windows: add support for stackdriver logging agent (#76850, @yujuhong)
- Admission webhooks are now properly called for `scale` and `deployments/rollback` subresources (#76849, @liggitt)
- Switch to instance-level update APIs for Azure VMSS loadbalancer operations (#76656, @feiskyer)
- kubeadm: kubeadm alpha cert renew now ignores certificates signed by external CAs (#76865, @fabriziopandini)
- Update to use go 1.12.4 (#76576, @cblecker)
- [metrics-server addon] Restore connecting to nodes via IP addresses (#76819, @serathius)
- fix detach azure disk back off issue which has too big lock in failure retry condition (#76573, @andyzhangx)
- Updated klog to 0.3.0 (#76474, @vincepri)
- kube-up.sh no longer supports "centos" and "local" providers (#76711, @dims)
- Ensure the backend pools are set correctly for Azure SLB with multiple backend pools (e.g. outbound rules) (#76691, @feiskyer)
- Windows nodes on GCE use a known-working 1809 image rather than the latest 1809 image. (#76722, @pjh)
- The userspace proxy now respects the IPTables proxy's minSyncInterval parameter. (#71735, @dcbw)
- Kubeadm will now include the missing certificate key if it is unable to find an expected key during `kubeadm join` when used with the `--experimental-control-plane` flow (#76636, @mdaniel)

v1.15.0-alpha.1

Documentation

Downloads for v1.15.0-alpha.1

filename	sha512 hash
kubernetes.tar.gz	e07246d1811bfcaf092a3244f94e4bcbfd050756aea1b56e8af54e9c016c16c9211ddeaaa08b8b398e823895dd7a8fc757e5674e11a86f1edc6f718b837cfe0c
kubernetes-src.tar.gz	ebd902a1cfdde0d9a0062f3f21732eed76eb123da04a25f9f5c7cfce8a2926dc8331e6028c3cd27aa84aaa0bf069422a0a0b0a61e6e5f48be7fe4934e1e786fc

Client Binaries

filename	sha512 hash
kubernetes-client-darwin-386.tar.gz	88ce20f3c1f914aebca3439b3f4b642c9c371970945a25e623730826168ebadc53706ac6f4422ea4295de86c7c6bff14ec96ad3cc8ae52d9920ecbdc9dab1729
kubernetes-client-	a5c1a43c7e3dbb27c1a4c7e41115963318872O6f768072e3fb7671075c11f2ed7c26873eef291c048415247845e86ff58aa9946a89c4aede5d847677e871ccd5

darwin-amd64.tar.gz	
kubernetes-client-linux-386.tar.gz	cf7513ab821cd0c979b1421034ce50e9bc0f347c184551cf4a9b6beab06588adda19f1b53b073525c0e73b5961beb5c1fab913c040c911acaa36496e4386a70d
kubernetes-client-linux-amd64.tar.gz	964296e9289e12bc02ec05fb5ca9e6766654f81e1885989f8185ee8b47573ae07731e8b3cb69742b58ab1e795df8e47fd110d3226057a4c56a9ebeae162f8b35
kubernetes-client-linux-arm.tar.gz	3480209c2112315d81e9ac22bc2a5961a805621b82ad80dc04c7044b7a8d63b3515f77ebdfad632555468b784bab92d018aeb92c42e8b382d0ce9f358f397514
kubernetes-client-linux-arm64.tar.gz	be7d5bb5fddfbbe95d32b354b6ed26831b1afc406dc78e9188eae3d957991ea4ceb04b434d729891d017081816125c61ea67ac10ce82773e25edb9f45b39f2d3
kubernetes-client-linux-ppc64le.tar.gz	bfaeb3b8b0b2e2dde8900cd2910786cb68804ad7d173b6b52c15400041d7e8db30ff601a7de6a789a8788100eda496f0ff6d5cdcabef775d4b09117e002fe758
kubernetes-client-linux-s390x.tar.gz	653c99e3171f74e52903ac9101cf8280a5e9d82969c53e9d481a72e0cb5b4a22951f88305545c0916ba958ca609c39c249200780fed3f9bf88fa0b2d2438259c
kubernetes-client-windows-386.tar.gz	9b2862996eadf4e97d890f21bd4392beca80e356c7f94abaf5968b4ea3c2485f3391c89ce331c1de69ff9380de0c0b7be8635b079c79181e046b854b4c2530e6
kubernetes-client-windows-amd64.tar.gz	97d87fcbc0cd821b3ca5ebfbda0b38fdc9c5a5ec58e521936163fead936995c6b26b0f05b711fbc3d61315848b6733778cb025a34de837321cf2bb0a1cca76d0

Server Binaries

filename	sha512 hash
kubernetes-server-linux-amd64.tar.gz	ffa2db2c39676e39535bcee3f41f4d178b239ca834c1aa6aafb75fb58cc5909ab94b712f2be6c0daa27ff249de6e31640fb4e5cdc7bdae82fc5dd2ad9f659518
kubernetes-server-linux-arm.tar.gz	a526cf7009fec5cd43da693127668006d3d6c4ebfb719e8c5b9b78bd5ad34887d337f25b309693bf844eedcc77c972c5981475ed3c00537d638985c6d6af71de
kubernetes-server-linux-arm64.tar.gz	4f9c8f85eebbf9f0023c9311560b7576cb5f4d2eac491e38aa4050c82b34f6a09b3702b3d8c1d7737d0f27fd2df82e8b0db5ab4600ca51efd5bd21ac38049062
kubernetes-server-linux-ppc64le.tar.gz	bf95f15c3edd9a7f6c2911eedd55655a60da288c9df3fed4c5b2b7cc11d5e1da063546a44268d6c3cb7d48c48d566a0776b2536f847507bcbcd419dcc8643f49
kubernetes-server-linux-s390x.tar.gz	a2588d8b3df5f7599cd84635e5772f9ba2c665287c54a6167784bb284eb09fb0e518e9acb0e295e18a77d48cc354c8918751b63f82504177a0b1838e9e89dfd3

Node Binaries

filename	sha512 hash
kubernetes-node-linux-amd64.tar.gz	b4e9faadd0e03d3d89de496b5248547b159a7fe0c26319d898a448f3da80eb7d7d346494ca52634e89850fbb8b2db1f996bc8e7efca6cff1d26370a77b669967
kubernetes-node-linux-arm.tar.gz	bf6db10d15a97ae39e2fcdf32c11c6cd8afcd254dc2fbc1fc00c5c74d6179f4ed74c973f221b0f41a29ad2e7d03e5fdebf1ab927ca2e2dea010e7519badf39a9
kubernetes-node-linux-arm64.tar.gz	e89b95a23e36164b10510492841d7d140a9bd1799846f4ee1e8fbd74e8f6c512093a412edfb93bd68da10718ccdbe826f4b6ffa80e868461e7b7880c1cc44346
kubernetes-node-linux-ppc64le.tar.gz	47f47c8b7fafc7d6ed0e55308ccb2a3b289e174d763c4a6415b7f1b7d2b81e4ee090a4c361eadd7cb9dd774638d0f0ad45d271ab21cc230a1b8564f06d9edae8
kubernetes-node-linux-s390x.tar.gz	8a0af4be530008bc8f120cd82ec592d08b09a85a2a558c10d712ff44867c4ef3369b3e4e2f5a5d0c2fa375c337472b1b2e67b01ef3615eb174d36fbfd80ec2ff
kubernetes-node-windows-amd64.tar.gz	f48886bf8f965572b78baf9e02417a56fab31870124240cac02809615caa0bc9be214d182e041fc142240f83500fe69c063d807cbe5566e9d8b64854ca39104b

Changelog since v1.14.0

Action Required

- client-go: The `rest.AnonymousClientConfig(*rest.Config) *rest.Config` helper method no longer copies custom `Transport` and `WrapTransport` fields, because those can be used to inject user credentials. (#75771, @liggitt)
- ACTION REQUIRED: The Node.Status.Volumes.Attached.DevicePath field is now unset for CSI volumes. Update any external controllers that depend on this field. (#75799, @msau42)

Other notable changes

- Remove the function Parallelize, please convert to use the function ParallelizeUntil. (#76595, @danielqsj)
- StorageObjectInUseProtection admission plugin is additionally enabled by default. (#74610, @oomichi)
  - So default enabled admission plugins are now
    `NamespaceLifecycle,LimitRanger,ServiceAccount,PersistentVolumeLabel,DefaultStorageClass,DefaultTolerationSeconds,MutatingAd`
    Please note that if you previously had not set the `--admission-control` flag, your cluster behavior may change (to be more standard).
- Juju provider source moved to the Charmed Kubernetes org (#76628, @kwmonroe)

- improve `kubectl auth can-i` command by warning users when they try access resource out of scope (#76014, @WanLinghao)
- Introduce API for watch bookmark events. (#74074, @wojtek-t)
  - Introduce Alpha field `AllowWatchBookmarks` in ListOptions for requesting watch bookmarks from apiserver. The implementation in apiserver is hidden behind feature gate `WatchBookmark` (currently in Alpha stage).
- Override protocol between etcd server and kube-apiserver on master with HTTPS instead HTTP when mTLS is enabled in GCE (#74690, @wenjiaswe)
- Fix issue in Portworx volume driver causing controller manager to crash (#76341, @harsh-px)
- kubeadm: Fix a bug where if couple of CRIs are installed a user override of the CRI during join (via kubeadm join --cri-socket ...) is ignored and kubeadm bails out with an error (#76505, @rosti)
- UpdateContainerResources is no longer recorded as a `container_status` operation. It now uses the label `update_container` (#75278, @Nessex)
- Bump metrics-server to v0.3.2 (#76437, @brett-elliott)
- The kubelet's /spec endpoint no longer provides cloud provider information (cloud_provider, instance_type, instance_id). (#76291, @dims)
- Change kubelet probe metrics to counter type. (#76074, @danielqsj)
  - The metrics `prober_probe_result` is replaced by `prober_probe_total`.
- Reduce GCE log rotation check from 1 hour to every 5 minutes. Rotation policy is unchanged (new day starts, log file size > 100MB). (#76352, @jpbetz)
- Add ListPager.EachListItem utility function to client-go to enable incremental processing of chunked list responses (#75849, @jpbetz)
- Added `CNI_VERSION` and `CNI_SHA1` environment variables in kube-up.sh to configure CNI versions on GCE. (#76353, @Random-Liu)
- Update cri-tools to v1.14.0 (#75658, @feiskyer)
- 2X performance improvement on both required and preferred PodAffinity. (#76243, @Huang-Wei)
- scheduler: add metrics to record number of pending pods in different queues (#75501, @Huang-Wei)
- Create a new `kubectl rollout restart` command that does a rolling restart of a deployment. (#76062, @apelisse)
- Added port configuration to Admission webhook configuration service reference. (#74855, @mbohlool)
  - Added port configuration to AuditSink webhook configuration service reference.
  - Added port configuration to CRD Conversion webhook configuration service reference.
  - Added port configuration to kube-aggregator service reference.
- `kubectl get -w` now prints custom resource definitions with custom print columns (#76161, @liggitt)
- Fixes bug in DaemonSetController causing it to stop processing some DaemonSets for 5 minutes after node removal. (#76060, @krzysztof-jastrzebski)
- no (#75820, @YoubingLi)
- Use stdlib to log stack trace when a panic occurs (#75853, @roycaihw)
- Fixes a NPD bug on GCI, so that it disables glog writing to files for log-counter (#76211, @wangzhen127)
- Tolerations with the same key and effect will be merged into one which has the value of the latest toleration for best effort pods. (#75985, @ravisantoshgudimetla)
- Fix empty array expansion error in cluster/gce/util.sh (#76111, @kewu1992)
- kube-proxy no longer automatically cleans up network rules created by running kube-proxy in other modes. If you are switching the mode that kube-proxy is in running in (EG: iptables to IPVS), you will need to run `kube-proxy --cleanup`, or restart the worker node (recommended) before restarting kube-proxy. (#76109, @vllry)
  - If you are not switching kube-proxy between different modes, this change should not require any action.
- Adds a new "storage_operation_status_count" metric for kube-controller-manager and kubelet to count success and error statues. (#75750, @msau42)
- GCE/Windows: disable stackdriver logging agent to prevent node startup failures (#76099, @yujuhong)
- StatefulSet controllers no longer force a resync every 30 seconds when nothing has changed. (#75622, @jonsabo)
- Ensures the conformance test image saves results before exiting when ginkgo returns non-zero value. (#76039, @johnSchnake)
- Add --image-repository flag to "kubeadm config images". (#75866, @jmkeyes)
- Paginate requests from the kube-apiserver watch cache to etcd in chunks. (#75389, @jpbetz)
  - Paginate reflector init and resync List calls that are not served by watch cache.
- `k8s.io/kubernetes` and published components (like `k8s.io/client-go` and `k8s.io/api`) now publish go module files containing dependency version information. See http://git.k8s.io/client-go/INSTALL.md#go-modules for details on consuming `k8s.io/client-go` using go modules. (#74877, @liggitt)
- give users the option to suppress detailed output in integration test (#76063, @Huang-Wei)
- CSI alpha CRDs have been removed (#75747, @msau42)
- Fixes a regression proxying responses from aggregated API servers which could cause watch requests to hang until the first event was received (#75887, @liggitt)
- Support specify the Resource Group of Route Table when update Pod network route (Azure) (#75580, @suker200)
- Support parsing more v1.Taint forms. `key:effect`, `key=:effect-` are now accepted. (#74159, @dlipovetsky)
- Resource list requests for PartialObjectMetadata now correctly return list metadata like the resourceVersion and the continue token. (#75971, @smarterclayton)
- `StubDomains` and `Upstreamnameserver` which contains a service name will be omitted while translating to the equivalent CoreDNS config. (#75969, @rajansandeep)
- Count PVCs that are unbound towards attach limit (#73863, @gnufied)
- Increased verbose level for local openapi aggregation logs to avoid flooding the log during normal operation (#75781, @roycaihw)
- In the 'kubectl describe' output, the fields with names containing special characters are displayed as-is without any pretty formatting. (#75483, @gsadhani)
- Support both JSON and YAML for scheduler configuration. (#75857, @danielqsj)
- kubeadm: fix "upgrade plan" not defaulting to a "stable" version if no version argument is passed (#75900, @neolit123)
- clean up func podTimestamp in queue (#75754, @denkensk)
- The AWS credential provider can now obtain ECR credentials even without the AWS cloud provider or being on an EC2 instance. Additionally, AWS credential provider caching has been improved to honor the ECR credential timeout. (#75587, @tiffanyfay)
- Add completed job status in Cronjob event. (#75712, @danielqsj)
- kubeadm: implement deletion of multiple bootstrap tokens at once (#75646, @bart0sh)
- GCE Windows nodes will rely solely on kubernetes and kube-proxy (and not the GCE agent) for network address management. (#75855, @pjh)
- kubeadm: preflight checks on external etcd certificates are now skipped when joining a control-plane node with automatic copy of cluster certificates (--certificate-key) (#75847, @fabriziopandini)
- [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.
- Support describe pod with inline csi volumes (#75513, @cwdsuzhou)
- Object count quota is now supported for namespaced custom resources using the count/. syntax. (#72384, @zhouhaibing089)

- In case kubeadm can't access the current Kubernetes version remotely and fails to parse the git-based version it falls back to a static predefined value of k8s.io/kubernetes/cmd/kubeadm/app/constants.CurrentKubernetesVersion. (#72454, @rojkov)
- Fixed a potential deadlock in resource quota controller Enabled recording partial usage info for quota objects specifying multiple resources, when only some of the resources' usage can be determined. (#74747, @liggitt)
- CRI API will now be available in the kubernetes/cri-api repository (#75531, @dims)
- Support vSphere SAML token auth when using Zones (#75515, @dougm)
- Transition service account controller clients to TokenRequest API (#72179, @WanLinghao)
- kubeadm: reimplemented IPVS Proxy check that produced confusing warning message. (#75036, @bart0sh)
- Allow to read OpenStack user credentials from a secret instead of a local config file. (#75062, @Fedosin)
- watch can now be enabled for events using the flag --watch-cache-sizes on kube-apiserver (#74321, @yastij)
- kubeadm: Support for deprecated old kubeadm v1alpha3 config is totally removed. (#75179, @rosti)
- The Kubelet now properly requests protobuf objects where they are supported from the apiserver, reducing load in large clusters. (#75602, @smarterclayton)
- Add name validation for dynamic client methods in client-go (#75072, @lblackstone)
- Users may now execute `get-kube-binaries.sh` to request a client for an OS/Arch unlike the one of the host on which the script is invoked. (#74889, @akutz)
- Move config local to controllers in kube-controller-manager (#72800, @stewart-yu)
- Fix some potential deadlocks and file descriptor leaking for inotify watches. (#75376, @cpuguy83)
- [IPVS] Introduces flag ipvs-strict-arp to configure stricter ARP sysctls, defaulting to false to preserve existing behaviors. This was enabled by default in 1.13.0, which impacted a few CNI plugins. (#75295, @lbernail)
- [IPVS] Allow for transparent kube-proxy restarts (#75283, @lbernail)
- Replace *_admission_latencies_milliseconds_summary and *_admission_latencies_milliseconds metrics due to reporting wrong unit (was labelled milliseconds, but reported seconds), and multiple naming guideline violations (units should be in base units and "duration" is the best practice labelling to measure the time a request takes). Please convert to use *_admission_duration_seconds and *_admission_duration_seconds_summary, these now report the unit as described, and follow the instrumentation best practices. (#75279, @danielqsj)
- Reset exponential backoff when storage operation changes (#75213, @gnufied)
- Watch will now support converting response objects into Table or PartialObjectMetadata forms. (#71548, @smarterclayton)
- N/A (#74974, @goodluckbot)
- kubeadm: fix the machine readability of "kubeadm token create --print-join-command" (#75487, @displague)
- Update Cluster Autoscaler to 1.14.0; changelog: https://github.com/kubernetes/autoscaler/releases/tag/cluster-autoscaler-1.14.0 (#75480, @losipiuk)