

GitHub Repository Metrics Report

kubernetes/kubernetes

Stars: 119834

Generated: 2026-01-14 18:36 UTC

KPI Summary

KPI	Value	KPI	Value
Open issues	282	Closed issues	230
Open/closed ratio	0.55	Avg resolution (days)	13.99
Bug/feature ratio	2.0	Reopen rate (%)	0.0
Files analyzed	1413	Test-to-code ratio	0.34
Hotspot files	0	Stale files	17
Open security alerts	0	Signed commits (%)	56.0
Protected branches	0	Avg remediation (days)	N/A

Collection notes: issues are fetched with a page cap in PDF mode; commits are sampled from the last ~90 days; hotspot/stale detection uses the thresholds in code.

Repository Overview

Repository: kubernetes/kubernetes
Stars: 119834
Generated: 2026-01-14 18:36 UTC

Issue & Backlog Metrics

Metric	Value
Open Issues	282
Closed Issues	230
Open Closed Ratio	0.55
Avg Resolution Time Days	13.99
Bug Issues	198
Feature Issues	99
Bug Feature Ratio	2.0
Issue Reopen Rate %	0.0
Issue Reopen Sample Size	30

Metric metadata

Open vs Closed Issues Ratio (Backlog health): $\text{open} / (\text{open} + \text{closed})$
 Average Issue Resolution Time (Delivery efficiency): average days from `created_at` to `closed_at` for closed issues.
 Issue Reopen Rate (Requirement clarity): % of sampled recent issues with at least one 'reopened' event (Issues Events API).
 Bug vs Feature Ratio (Product stability): $\text{bug-labeled issues} / \text{feature-labeled issues}$ (supports labels like 'kind:bug').
 Issues Created vs Closed per Sprint (Throughput consistency): counts grouped by 14-day sprints starting at earliest `created_at` in the fetched set.

Total Issues (open + closed): 512

Open Issues (Oldest sample)

#	Title	Created	Age (days)	Comments	Author
134215	Unable to set PriorityClass via MutatingAdmissionPolicy	2025-09-23	113	4	adrianrademann
134218	Failed to set 'cpuset.cpus'No space left on device	2025-09-23	113	3	rucawang
134224	CEL CIDR parser does not behave as documented	2025-09-23	113	15	danwinship
134226	Server-Side Defaulting and Server-Side Apply Don't Play Nicely Together	2025-09-23	113	18	stevekuznetsov
134232	Incorrect pod phase transition after node reboot with init containers	2025-09-23	112	2	toVersus
134236	Flaky CPU Manager Metrics tests with Linux Kernel 6.12.41+ and containerd version 2.1.3 nodes	2025-09-24	112	5	esotsal
134241	[Flaky Test] [sig-storage] aws kops cluster TLS handshake timeout	2025-09-24	112	4	esotsal
134253	[Windows] usageNanoCores reported by /stats/summary occasionally higher than number of vCPUs available	2025-09-24	111	3	kondracek-nr

#	Title	Created	Age (days)	Comments	Author
134261	Run some scheduler_perf workloads with lowered kube-apiserver performance	2025-09-25	111	3	macsko
134264	User Namespace: Allow simultaneous use of hostNetwork and userns	2025-09-25	111	17	HirazawaUi
134280	[Umbrella][Declarative Validation] Enable Declarative Validation for APIs	2025-09-25	111	4	yongruilin
134285	Lifecycle Hooks: PreStop httpGet hooks do not work with host networking	2025-09-26	110	14	bmacdonell-roblox
134287	The log file size in the /var/log/pods directory exceeds the configured containerLogMaxSize.	2025-09-26	110	5	Black-max12138
134289	Ephemeral-storage data on node status does not reflect actual available storage after disk expansion	2025-09-26	110	5	jakubsolecki
134300	[Windows] k8s.io/kubernetes/pkg: routes TestPreCheckLogFileNameLength failing	2025-09-26	109	2	tallclair
134322	A potential goroutine leak in staging/src/k8s.io/apimachinery/pkg/watch/mux.go	2025-09-29	107	3	user12031
134323	A potential goroutine leak in staging/src/k8s.io/client-go/util/workqueue/delaying_queue.go	2025-09-29	107	3	user12031
134324	High-throughput container logs cause kubelet log rotation to hang, leading to unbounded 0.log growth (v1.27+ timestamp-b	2025-09-29	107	6	cclank
134332	[Flaking Test] [sig-scalability] Collecting pod startup latency [00] - PodStartupLatency	2025-09-29	106	14	adilGhaffarDev
134336	Support rules for defining when controller replicas become available	2025-09-30	106	7	lojies
134337	kubernetes applications to handle SIGUSR1 or similar methods to dump call stack	2025-09-30	106	3	tdihp
134338	preStop sleep continues after PID 1 exits	2025-09-30	106	12	wedge-jarrad
134343	apiserver: stats.go Error getting keys. Too large resource version	2025-09-30	106	16	svenwiltink
134344	ci-kubernetes-e2e-gci-gce-alpha-enabled-default cluster failing to come up	2025-09-30	106	13	BenTheElder
134356	DRA API helper: add automated fuzz testing of conversion roundtripping	2025-10-01	105	3	pohly
134375	Introduce Resource Size as a new Scalability Dimension	2025-10-02	104	10	serathius
134395	Static Memory Manager doesn't verify OS reported available huge pages during pod admission	2025-10-03	103	1	zoliszel
134424	improve SetFeatureGateDuringTest, drop SetFeatureGateEmulationVersionDuringTest?	2025-10-05	101	8	danwinship
134428	improved preemption logic for the kubernetes scheduler	2025-10-05	100	16	MenD32
134444	Verify if calling both ValidateObjectMeta and ValidateObjectMetaUpdate for update validation is necessary and update cal	2025-10-06	99	4	aaron-prindle

Issue Resolution Time (Longest sample)

#	Title	Created	Closed	Resolution (day)
134299	[Flaking Test] UT k8s.io/kubernetes/pkg/controller: podautoscaler	2025-09-26	2025-12-22	86
134386	Failure cluster [5870e728...]: TestMultipleHPAs	2025-10-02	2025-12-22	80
134321	"Services should implement service.kubernetes.io/headless" is broken	2025-09-28	2025-12-18	80
134252	pull-kubernetes-e2e-gce e2e.go: up flaking	2025-09-24	2025-12-13	79
134393	PodAffinity's QHint misses the scenario with existing pods' anti-affinity	2025-10-03	2025-12-18	75
134427	DATA RACE: TestWebhookNotCalledForUnusedVersions	2025-10-05	2025-12-19	74
134421	kubect! get ingressclass should display (default) marker like storageclass	2025-10-05	2025-12-18	73
134418	DATA RACE: [Conformance] should allow to use a pod failure policy to ignore failure matching on DisruptionTarget conditi	2025-10-05	2025-12-16	72
134569	DRA: standardize parameter resource.kubernetes.io/pciAddress for the example pcie address of devices	2025-10-13	2025-12-18	65
134563	A goroutine leak in pkg/controller/nodeipam/ipam/sync/sync_test.go	2025-10-13	2025-12-18	65
134640	Kubect! dry-run command behavior is weird	2025-10-16	2025-12-18	63
135222	Deployment scaleReplicaSetAndRecordEvent vs scaleReplicaSet duplication cleanup is problematic	2025-11-07	2026-01-08	62
135185	DRA e2e test "must reuse one gRPC connection for service and health-monitoring calls" flakes	2025-11-06	2026-01-07	62
135375	[Failing CI Test] node-kubelet-serial-crio	2025-11-20	2026-01-12	53
134468	[Flaking Test] k8s.io/kubernetes/test/integration/etcd.etcd	2025-10-08	2025-12-01	53
135317	[Flaky Test] [sig-node] E2eNode Suite.[It] [sig-node] [DRA] [Feature:DynamicResourceAllocation] [FeatureGate:DynamicReso	2025-11-16	2026-01-07	52
135417	[code-generator] defaulter-gen should not generate when no tag exists	2025-11-24	2026-01-13	49
135357	Unsorted list of runtime handlers causes redundant node updates	2025-11-19	2026-01-08	49
134999	Add a metric that detects that the pod has been successfully scheduled after being flushed from unschedulablePods	2025-10-31	2025-12-18	47
135404	tighten DRA extended resource quota verification	2025-11-22	2026-01-06	44
134486	[CLE] LeaseCandidate does not support configurable durations	2025-10-08	2025-11-20	43
135141	Drop v2beta1 and v2beta2 HPA API versions	2025-11-05	2025-12-18	42
134249	Asynchronous preemption can be initiated even before the previous one is finished for the same pod	2025-09-24	2025-11-06	42
135210	[Ubuntu 25.10 (uutils)] `hack/lib/version.sh: line 166: DATE: unbound variable`	2025-11-07	2025-12-18	41
135034	[Failing Test] [sig-scalability] ClusterLoaderV2.huge-service: [step: 11] gathering measurements [01] - APIResponsiveness	2025-11-01	2025-12-13	41
135266	kube-proxy generate no iptables rules when endpointslices have two ep with same ip but one pod is terminating	2025-11-12	2025-12-18	36
134217	Preemption process does not leave a trait in the scheduler cache causing a race	2025-09-23	2025-10-29	36
135669	pod admission checks whether an extended resource exists in node allocatable, instead of checking whether the allocatabl	2025-12-08	2026-01-13	35

#	Title	Created	Closed	Resolution (day)
135667	DRA implicit extended resource should be treated the same as regular extended resource during pod admission	2025-12-08	2026-01-13	35
135703	Failure cluster [c9b0c83e...] E2eNode Suite [It] [sig-node] [FeatureGate:KubeletEnsureSecretPulledImages] failure on cri	2025-12-10	2026-01-14	34

Issue Reopen Rate (Recent sample)

#	State	Reopens	Last Reopened
136228	open	0	
136222	open	0	
136221	open	0	
136218	open	0	
136213	closed	0	
136210	closed	0	
136203	open	0	
136201	open	0	
136188	open	0	
136181	closed	0	
136179	open	0	
136175	open	0	
136171	open	0	
136169	open	0	
136165	open	0	
136163	open	0	
136158	open	0	
136149	closed	0	
136148	closed	0	
136144	closed	0	
136135	open	0	
136126	closed	0	
136121	closed	0	
136120	open	0	
136114	open	0	
136113	closed	0	
136107	open	0	
136102	closed	0	
136095	open	0	

#	State	Reopens	Last Reopened
136094	closed	0	

Issue Throughput by Sprint

Total Created: 512 Total Closed: 230

Sprint Start	Created	Closed
2025-09-23	62	10
2025-10-07	77	31
2025-10-21	83	28
2025-11-04	66	47
2025-11-18	57	19
2025-12-02	59	22
2025-12-16	49	36
2025-12-30	51	32
2026-01-13	8	5

Showing last 9 sprints. Full history is in [reports/issue_sprint_throughput.csv](#).

Code Quality & Maintenance

Metric	Value
Files Analyzed	1413
Hotspot Files	0
Test To Code Ratio	0.34
Stale Files	17

Code Churn

Total churn: 132140 Avg churn/file: 93.52

File	Churn	Commits
vendor/go.opentelemetry.io/otel/semconv/v1.37.0/attribute_group.go	30386	2
vendor/go.opentelemetry.io/otel/semconv/v1.37.0/otelconv/metric.go	4252	2
test/e2e_dra/upgradedowngrade_test.go	2544	7
test/instrumentation/documentation/documentation-list.yaml	2138	4
test/e2e/dra/dra.go	2024	5
vendor/go.opentelemetry.io/otel/semconv/v1.37.0/rpcconv/metric.go	1840	2
vendor/golang.org/x/tools/internal/stdlib/deps.go	1552	2
test/utls/ktesting/tcontext.go	1268	5
cmd/genfeaturegates/genfeaturegates.go	1196	2
vendor/golang.org/x/tools/internal/stdlib/manifest.go	1180	2
test/e2e/dra/utls/deploy.go	1072	4
vendor/go.opentelemetry.io/contrib/instrumentation/google.golang.org/grpc/otelgrpc/interceptor.go	1002	2
pkg/scheduler/framework/plugins/dynamicresources/dynamicresources_test.go	976	2
vendor/golang.org/x/exp/slices/zsortordered.go	962	2
vendor/golang.org/x/exp/slices/zsortanyfunc.go	958	2
test/e2e_dra/resourceclaimstatus_test.go	948	5
test/e2e/storage/utls/create.go	916	4
vendor/github.com/mistifyio/go-zfs/zfs.go	904	2
vendor/golang.org/x/exp/slices/slices.go	894	2
staging/src/k8s.io/kubectrl/pkg/describe/describe_test.go	894	3
test/utls/ktesting/assert_test.go	792	6
cluster/images/etcd/migrate/integration_test.go	769	3
test/e2e/dra/utls/builder.go	760	4
vendor/github.com/karrick/godirwalk/walk.go	758	2
vendor/github.com/mistifyio/go-zfs/utls.go	720	2
vendor/github.com/karrick/godirwalk/README.md	648	2

File	Churn	Commits
test/instrumentation/documentation/documentation.md	638	4
vendor/github.com/google/cadvisor/fs/fs.go	608	2
staging/src/k8s.io/apiserver/pkg/storage/cacher/cacher_whitebox_test.go	556	4
test/utls/ktesting/assert.go	554	4
test/integration/dra/resourceslicecontroller.go	536	4
cluster/images/etcd/Makefile	532	2
test/utls/ktesting/errorcontext.go	530	4
vendor/go.opentelemetry.io/contrib/instrumentation/google.golang.org/grpc/otelgrpc/stats_handler.go	530	2
staging/src/k8s.io/dynamic-resource-allocation/structured/internal/allocator/testing/allocator_testing.go	526	2
pkg/scheduler/framework/plugins/noderesources/fit_test.go	520	6
staging/src/k8s.io/client-go/discovery/discovery_client.go	502	1
cluster/images/etcd/migrate/options.go	498	2
test/compatibility_lifecycle/reference/feature_list.md	472	10
vendor/github.com/google/cadvisor/manager/manager.go	454	2
pkg/controller/volume/selinuxwarning/selinux_warning_controller_test.go	451	2
pkg/kubelet/config/config_test.go	446	4
test/e2e/framework/framework.go	428	6
pkg/registry/discovery/endpointslice/declarative_validation_test.go	408	7
LICENSES/vendor/github.com/mistifyio/go-zfs/LICENSE	408	2
vendor/go.opentelemetry.io/otel/SECURITY-INSIGHTS.yml	406	2
vendor/github.com/mistifyio/go-zfs/LICENSE	402	2
cluster/images/etcd/migrate/migrate_client.go	402	2
vendor/github.com/godbus/dbus/v5/decoder.go	394	2
LICENSES/vendor/github.com/mrunalp/fileutils/LICENSE	390	2
cluster/images/etcd/migrate/migrator.go	388	2
vendor/google.golang.org/grpc/binarylog/grpc_binarylog_v1/binarylog.pb.go	382	2
vendor/github.com/mrunalp/fileutils/LICENSE	382	2
cluster/images/etcd/migrate/data_dir.go	378	2
pkg/kubelet/config/config.go	364	4
vendor/github.com/karrick/godirwalk/scandir_unix.go	362	2
vendor/github.com/google/cadvisor/fs/plugin.go	358	2
pkg/controller/history/benchmark_test.go	356	2
test/e2e_dra/gtesting_test.go	356	4
cluster/images/etcd/migrate/versions.go	356	2

File	Churn	Commits
vendor/golang.org/x/sys/cpu/cpu_x86.go	348	2
vendor/github.com/mrunalp/fileutils/fileutils.go	342	2
go.sum	334	20
test/utls/ktesting/stepcontext.go	334	5
cluster/images/etcd/migrate/data_dir_test.go	334	2
vendor/golang.org/x/exp/slices/sort.go	324	2
test/e2e_dra/coredra_test.go	324	6
pkg/apis/resource/v1/zz_generated.validations.go	324	4
pkg/apis/resource/v1beta1/zz_generated.validations.go	324	4
pkg/apis/resource/v1beta2/zz_generated.validations.go	324	4
vendor/golang.org/x/net/http2/transport.go	320	2
vendor/google.golang.org/grpc/reflection/grpc_reflection_v1alpha/reflection.pb.go	314	2
vendor/go.opentelemetry.io/otel/trace/trace.go	312	2
test/utls/ktesting/helper_test.go	308	3
staging/src/k8s.io/apiserver/pkg/storage/cacher/testing/mock.go	306	2
vendor/google.golang.org/grpc/reflection/grpc_reflection_v1/reflection.pb.go	304	2
test/utls/ktesting/withcontext.go	302	3
vendor/github.com/karrick/godirwalk/scandir_windows.go	298	2
vendor/go.opentelemetry.io/otel/CHANGELOG.md	298	2
pkg/kubelet/lifecycle/predicate_test.go	292	4
pkg/apis/discovery/v1/zz_generated.validations.go	292	7
pkg/apis/discovery/v1beta1/zz_generated.validations.go	290	7
vendor/github.com/godbus/dbus/v5/transport_unix.go	288	2
pkg/controller/resourceclaim/controller.go	280	2
vendor/go.opentelemetry.io/otel/sdk/trace/tracer.go	276	2
test/e2e/framework/ginkgowrapper.go	274	2
staging/src/k8s.io/apiserver/go.sum	273	16
staging/src/k8s.io/apiextensions-apiserver/go.sum	269	16
staging/src/k8s.io/cloud-provider/go.sum	269	16
staging/src/k8s.io/controller-manager/go.sum	269	16
staging/src/k8s.io/kube-aggregator/go.sum	269	16
staging/src/k8s.io/pod-security-admission/go.sum	269	16
staging/src/k8s.io/sample-apiserver/go.sum	269	16
pkg/controller/resourceclaim/controller_test.go	268	2
cluster/images/etcd/migrate/options_test.go	268	2

File	Churn	Commits
cluster/images/etcd/migrate/migrate_server.go	266	2
vendor/github.com/karrick/godirwalk/readdir_unix.go	262	2
vendor/go.opentelemetry.io/contrib/instrumentation/google.golang.org/grpc/otelgrpc/config.go	260	2
staging/src/k8s.io/dynamic-resource-allocation/go.sum	259	16
vendor/google.golang.org/grpc/CONTRIBUTING.md	258	2

Top 100 files by churn. Full listing is in reports/code_churn_by_file.csv.

Hotspot Files

No hotspot files found (per current thresholds).

Stale Files (No recent commits)

File	Last Commit
pkg/volume/util/operationexecutor/operation_generator.go	2025-01-11
staging/src/k8s.io/apimachinery/pkg/util/httpstream/spdy/connection.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/httpstream/spdy/upgrade.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/httpstream/wsstream/conn.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/httpstream/wsstream/stream.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/httpstream/wsstream/stream_test.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/net/http.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/net/interface.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/net/interface_test.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/proxy/dial.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/proxy/transport.go	2024-12-10
staging/src/k8s.io/apimachinery/pkg/util/proxy/upgradeaware.go	2024-12-10
test/e2e/framework/framework.go	2024-01-03
test/e2e/framework/internal/unittests/cleanup/cleanup_test.go	2024-01-03
test/e2e/framework/volume/fixtures.go	2025-01-19
test/e2e/storage/csimock/base.go	2025-01-19
test/e2e/storage/csimock/csi_attach_volume.go	2025-01-19

Security & Compliance

Metric	Value
Open Security Alerts	0
Avg Remediation Time Days	N/A
Signed Commits Percentage	56.0
Protected Branches	0

Note: Dependabot Alerts may be inaccessible for some repos/tokens; in that case the CSV will show 0 alerts.

Metric metadata

Open security alerts (Dependabot): count of open alerts returned by the Dependabot Alerts API.

Time to remediate vulnerabilities: average days between created_at and fixed_at for fixed alerts (if available).

Signed commits percentage: % of recent commits whose verification.verified == true.

Protected branches count: number of branches where the branch protection endpoint returns data.

Signed Commits (Sample)

SHA	Date	Author	Verified
cc55e34478	2026-01-14T14:21:46Z	Kubernetes Prow Robot	True
c086a712b1	2026-01-14T13:31:38Z	Kubernetes Prow Robot	True
d966d9b89d	2026-01-13T11:59:32Z	Ed Bartosh	False
62277ef5d2	2026-01-14T03:19:43Z	Kubernetes Prow Robot	True
8bafe2cef1	2026-01-14T03:19:35Z	Kubernetes Prow Robot	True
c29a5d73a6	2026-01-13T22:45:34Z	Kubernetes Prow Robot	True
c825d80bbf	2026-01-11T21:50:37Z	Davanum Srinivas	False
9674c06ec4	2026-01-13T20:37:36Z	Kubernetes Prow Robot	True
2522628780	2025-12-03T21:25:07Z	Jefftree	False
ce793bf4d6	2026-01-13T19:41:42Z	Kubernetes Prow Robot	True
b639540931	2026-01-13T19:41:35Z	Kubernetes Prow Robot	True
6264b559c9	2026-01-13T19:08:50Z	aviralgarg05	False
c6be052768	2026-01-13T17:37:39Z	Kubernetes Prow Robot	True
c16a07a8b1	2025-11-24T16:26:36Z	Patrick Ohly	False
c20e0bc541	2026-01-13T16:11:40Z	Kubernetes Prow Robot	True
588bba42c7	2024-12-10T12:33:18Z	Patrick Ohly	False
58000ddd0e	2026-01-13T14:09:38Z	Kubernetes Prow Robot	True
1abe2c4860	2026-01-13T12:52:43Z	Sascha Grunert	True
eb35b0a657	2026-01-13T12:21:56Z	Marek Siarkowicz	False
3164b73d28	2026-01-13T10:13:52Z	HirazawaUi	False
9f6977db54	2026-01-13T09:59:37Z	Kubernetes Prow Robot	True

SHA	Date	Author	Verified
6b541e0b58	2026-01-13T04:21:41Z	Kubernetes Prow Robot	True
e0464327ce	2026-01-13T03:03:36Z	Kubernetes Prow Robot	True
fa8340b207	2026-01-13T02:13:43Z	Kubernetes Prow Robot	True
d68d48073f	2026-01-13T02:13:36Z	Kubernetes Prow Robot	True
31cdb5de61	2026-01-12T23:55:38Z	Kubernetes Prow Robot	True
42b8ceee21	2026-01-12T22:09:50Z	Lalit Chauhan	False
1c894014eb	2026-01-12T21:35:37Z	Kubernetes Prow Robot	True
900a8030f3	2026-01-12T20:58:43Z	Anish Ramasekar	True
477b99a8d8	2026-01-12T20:45:08Z	Kubernetes Prow Robot	True

Branch Protection (Sample)

Branch	Protected
feature-rate-limiting	False
feature-serverside-apply	False
feature-workload-ga	False
master	False
release-0.4	False
release-0.5	False
release-0.6	False
release-0.7	False
release-0.8	False
release-0.9	False
release-0.10	False
release-0.12	False
release-0.13	False
release-0.14	False
release-0.15	False
release-0.16	False
release-0.17	False
release-0.18	False
release-0.19	False
release-0.20	False
release-0.21	False
release-1.0	False
release-1.1	False

Branch	Protected
release-1.2	False
release-1.3	False
release-1.4	False
release-1.5	False
release-1.6	False
release-1.6.3	False
release-1.7	False