

Error / Issue	Category	Fix / Mitigation
AccessDenied ... storage.objects.get	Authentication/IAM	Give user Project Viewer + Cloud Build Editor roles or use a dedicated logs bucket with correct permissions.
Missing necessary permission iam.serviceAccounts.actAs	Authentication/IAM	Grant iam.serviceAccounts.actAs permission between accounts.
cloudfunctions.functions.get denied	Deployment / Authentication/IAM	Add Cloud Functions Developer role to build SA.
cloudbuild.builds.create denied	Deployment / Authentication/IAM	Grant Cloud Build SA role or specific permission to create builds.
serviceusage.services.use permission denied	Authentication/IAM	Ensure Cloud Build service agent exists and has roles/cloudbuild.serviceAgent.
Failed to trigger build: Couldn't read commit	Configuration	Verify trigger branch, repo, commit SHA; correct trigger config.
Request is prohibited by organization's policy	Configuration / Trigger	Temporarily allow Pub/Sub, create trigger, then reapply org policy.
fatal: could not read Username for '<REMOTE_URL>'	Dependency / Source	Provide SSH key or token in build to authenticate.
invalid empty ssh-agent socket	Dependency / Source	Ensure SSH_AUTH_SOCK is set; configure SSH agent correctly.
Unable to connect ... no route to host	Networking / Private Pool	Use non-overlapping IP range for private pool.
Failed to connect to <external_domain>: Connection timed out	Networking / Private Pool	Assign external IPs to pool or configure NAT for external access.
Timeout - last error: dial tcp i/o timeout	Networking	Fix VPC peering, firewall, routing; configure private pool internal access.
404 : Requested entity was not found	Configuration / Trigger	Double-check source location, triggers, config files, IAM.
Quota restrictions, cannot run builds in this region	Quota / Resource	Request quota increase or use supported region.
docker build failed: failed to solve: file not found	Build	Check Dockerfile paths and build context.
Compilation failed: symbol not found	Build	Update dependency versions; sync build tools.
Cannot read property 'xyz' of undefined	Build / Runtime	Ensure environment variables exist and build script passes them.
Container failed to start: PORT env variable not set	Startup / Runtime	Modify code to listen on process.env.PORT.
CrashLoopBackOff	Startup / Runtime	Add required secrets, confirm network access, check env vars.
ImagePullBackError	Deployment / Startup	Grant Artifact Registry read permission to build SA.
jest: command not found	Test Runner	Install dev dependencies in build or run tests inside build environment.
pytest failed: database connection refused	Test Runner	Use additional build step or service to run DB during test stage.
JUnit test failed: null pointer	Test Assertion	Debug test locally, mock dependencies, ensure env variables.
denied: Permission denied to access repository	Upload / Artifact	Add roles/artifactregistry.writer to Cloud Build SA.
Object upload failed: 403 Forbidden	Upload / Artifact	Assign roles/storage.objectAdmin or bucket ACL.
Internal Error (status = INTERNAL_ERROR)	Build / Internal	Retry build; check quota usage; file support ticket if persistent.
Error response: i/o timeout (docker pull)	Build / Dependency	Pre-pull image using crane or configure proxy / network.
Unauthenticated (long-running Docker push/pull)	Authentication / IAM	Use custom token with sufficient lifespan.
Builds stuck / queued in private pool	Startup / Networking	Fix VPC peering or recreate private pool.
Approving old builds fails	Deployment / Lifecycle	Re-submit a new build instead of approving old one.
Secure Source Manager: "Build cannot be created"	Configuration / Trigger	Validate triggers.yaml; ensure SSM and Build SA have correct IAM.
Cloud Build logs not visible	Authentication / IAM	Grant Storage Object Viewer or Project Viewer role.
Cloud Run deploy internal error	Deployment / Startup	Ensure build SA has correct roles; check Cloud Build logs.
App Engine: Duplicate tags not allowed	Configuration	Remove or correct instance_tag in app.yaml.
App Engine: Max instances exceeded	Quota / Resource	Lower max_instances or delete old versions.
App Engine: Build succeeds but logs missing	Build / Config	Use Google-managed encryption keys; adjust retention policy.
GitLab + Cloud Build: Failed to fetch repo	Configuration / Source	Re-authorize GitLab connection; verify SCM permissions.
Flaky build / inconsistent errors	Build / Resource	Retry builds; monitor memory/CPU; consider different machine type.
UI / console missing builds	UI / Authentication	Try CLI; check IAM; clear browser cache.
Build cannot be canceled	Build Lifecycle	Use CLI cancel; contact support if persists.
Cloud Build SA cannot get build	Deployment / Authentication	Grant cloudbuild.builds.get permission.
Artifact Registry upload denied	Upload / Artifact	Grant artifactregistry.repositories.uploadArtifacts to Cloud Build SA.
Accessing private GCS fails	Dependency / Upload	Use GCS client library or authorized requests.
App Engine node build fails (tsconfig missing)	Build / Config	Include tsconfig.json in build context; avoid ignoring necessary files.
Placeholder image deployed on Cloud Run	Deployment / Config	Reconfigure CD trigger; check trigger setup and permissions.
Internal "INTERNAL_ERROR"	Build / Internal	Retry; check quota; contact support if persists.
Cross-project trigger creation failing	Configuration / Trigger	Grant tokenAccessor role or recreate trigger with correct IAM.
Permission error deploying to Cloud Run	Deployment / Authentication	Add cloudbuild.builds.get or Viewer/Editor roles.
Artifact Registry upload denied on function deploy	Upload / Artifact	Grant Artifact Registry write permission to Cloud Build SA.
Region quota exceeded	Quota / Resource	Check quotas in GCP Console; request increase.
Container crash on Cloud Run	Startup / Runtime	Confirm app listens on correct port; adjust startup timeout.
Unexpected error for Firebase Function	Deployment / Upload	Fix IAM permissions; check build config; ensure correct registry path.