
DevOps Shack

100 Real Time Nexus Artifact Management Errors, Solution and RCA

Installation and Configuration Issues

1. **Error:** Nexus Repository service not starting.
 - **Solution:** Check for JVM configuration and ensure correct `JAVA_HOME` setup.
 - **RCA:** Incorrect Java version or corrupted installation files.
2. **Error:** Permission denied while installing Nexus.
 - **Solution:** Verify user permissions and provide necessary access rights.
 - **RCA:** User lacks write access to the installation directory.
3. **Error:** Nexus hangs during startup.
 - **Solution:** Increase JVM heap size in `nexus.vmoptions`.
 - **RCA:** Insufficient memory allocation for Nexus.

Repository Management Errors

4. **Error:** "Artifact not found in the repository."
 - **Solution:** Verify the repository's configuration and ensure the artifact exists.
 - **RCA:** Artifact may not have been uploaded correctly.
5. **Error:** Unable to delete artifacts.



- **Solution:** Check for repository cleanup policies and permissions.
- **RCA:** Repository is locked by a retention policy or permissions are inadequate.

Proxy Repository Issues

- 6. Error:** Proxy repository not syncing artifacts.
 - **Solution:** Check the upstream URL and network connectivity.
 - **RCA:** Incorrect proxy URL or network issues.
- 7. Error:** "403 Forbidden" while accessing a proxy repository.
 - **Solution:** Update credentials in the proxy settings.
 - **RCA:** Invalid or expired credentials for the remote repository.

Performance Issues

- 8. Error:** High CPU usage by Nexus Repository Manager.
 - **Solution:** Optimize database cleanup policies and reduce indexing frequency.
 - **RCA:** Overloaded system due to large repository sizes or frequent metadata refresh.
- 9. Error:** Slow artifact downloads.
 - **Solution:** Implement caching and increase bandwidth allocation.
 - **RCA:** Lack of caching or throttled network.

Artifact Upload Issues

- 10. Error:** "Artifact size exceeds the allowed limit."
 - **Solution:** Adjust the maximum file size in repository settings.
 - **RCA:** Default size limit is too low for large artifacts.
- 11. Error:** "Checksum mismatch during upload."
 - **Solution:** Recalculate checksums and re-upload the artifact.



- **RCA:** Artifact corrupted during upload or tampered with.

Security Issues

12. Error: Unauthorized access to repository.

- **Solution:** Assign roles and permissions to users/groups properly.
- **RCA:** Misconfigured security settings or inadequate access control.

13. Error: Repository exposed to public unintentionally.

- **Solution:** Restrict anonymous access and enable IP whitelisting.
- **RCA:** Misconfigured security settings.

Database Errors

14. Error: "Database locked" during repository operations.

- **Solution:** Restart Nexus and check database connectivity.
- **RCA:** Simultaneous access leading to database lock.

15. Error: Database corruption detected.

- **Solution:** Restore from a recent backup and resolve underlying issues.
- **RCA:** Improper shutdown or hardware failure.

Integration Errors

16. Error: Maven build fails with "401 Unauthorized."

- **Solution:** Update Maven settings with the correct Nexus credentials.
- **RCA:** Authentication configuration mismatch between Maven and Nexus.

17. Error: Jenkins unable to push artifacts to Nexus.

- **Solution:** Configure correct Nexus credentials in Jenkins pipeline.
- **RCA:** Incorrect credentials or lack of permissions in Nexus.

Backup and Restore Issues



18. Error: Backup process failing intermittently.

- **Solution:** Automate backups during off-peak hours and monitor disk usage.
- **RCA:** High repository activity or insufficient disk space.

19. Error: Restore fails with "incomplete archive."

- **Solution:** Verify backup integrity and ensure complete transfer.
- **RCA:** Partial backup due to connectivity issues or disk failure.

Logging and Monitoring Issues

20. Error: Logs not rotating, causing disk usage to spike.

- **Solution:** Configure log rotation policies in `logback.xml`.
- **RCA:** Default log rotation not configured.

21. Error: Unable to enable debug logging.

- **Solution:** Update the logging level in `logback.xml` and restart Nexus.
- **RCA:** Incorrect logging configuration.

Artifact Storage Issues

22. Error: Storage quota exceeded for the repository.

- **Solution:** Increase storage capacity or delete unused artifacts.
- **RCA:** Insufficient disk space or overly restrictive storage limits.

23. Error: "Blob store unavailable."

- **Solution:** Verify the blob store configuration and connectivity.
- **RCA:** Blob store misconfiguration or network issues.

24. Error: Artifacts missing from blob store.

- **Solution:** Run the `Repair - Reconcile Component Database` task in Nexus.
- **RCA:** Incomplete synchronization between database and blob store.

Cleanup Policy Issues

25. Error: Cleanup policy not deleting old artifacts.

- **Solution:** Verify the policy conditions and task scheduling.
- **RCA:** Misconfigured cleanup policy or inactive cleanup task.

26. Error: Cleanup task deletes required artifacts.

- **Solution:** Adjust policy to exclude necessary artifacts and reconfigure rules.
 - **RCA:** Overly aggressive cleanup rules.
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XIII. Indexing Errors

27. Error: Repository indexing fails.

- **Solution:** Clear and rebuild the repository index.
- **RCA:** Corrupt index files or excessive repository size.

28. Error: "Index out of sync" error in Maven.

- **Solution:** Force a reindex and update the Maven local repository.
- **RCA:** Repository updates not reflected in the index.

Connectivity Issues

29. Error: Nexus unable to connect to the internet.

- **Solution:** Check proxy and firewall configurations.
- **RCA:** Firewall blocking or incorrect proxy settings.

30. Error: Timeout when accessing remote repositories.

- **Solution:** Increase timeout settings in the repository configuration.
- **RCA:** Slow network or remote repository latency.



31. Error: SSL handshake failure.

- **Solution:** Verify and update SSL certificates.
- **RCA:** Expired or mismatched certificates.

User Management Issues

32. Error: Cannot add new users to Nexus.

- **Solution:** Check for database locks and user permission settings.
- **RCA:** Database issue or insufficient admin rights.

33. Error: User roles not applied correctly.

- **Solution:** Review role mappings and clear cache.
- **RCA:** Misconfigured role hierarchy or cache inconsistency.

Task Scheduling Errors

34. Error: Scheduled tasks not running.

- **Solution:** Verify task settings and check Nexus logs.
- **RCA:** Task disabled or misconfigured trigger.

35. Error: Task execution fails with "out of memory."

- **Solution:** Increase JVM heap size or optimize task parameters.
- **RCA:** Insufficient memory for task execution.

Logging Errors

36. Error: No logs generated for repository events.

- **Solution:** Enable event logging in Nexus.
- **RCA:** Event logging disabled or incorrect configuration.

37. Error: Log file corruption.

- **Solution:** Delete the corrupted file and restart logging services.
- **RCA:** Unexpected system shutdown or disk issues.

Backup and Disaster Recovery Issues

38. Error: Automated backups failing.

- **Solution:** Verify backup scripts and destination paths.
- **RCA:** Incorrect paths or permissions for the backup location.

39. Error: Inconsistent backups after restore.

- **Solution:** Validate the backup process and ensure all components are included.
- **RCA:** Partial or incomplete backup configuration.

Proxy Cache Problems

40. Error: Proxy cache not serving artifacts.

- **Solution:** Clear the cache and re-synchronize with the remote repository.
- **RCA:** Corrupt cache or outdated metadata.

41. Error: Cache retention settings ignored.

- **Solution:** Verify and update cache retention policies.
- **RCA:** Misconfigured policy or outdated repository version.

Remote Repository Issues

42. Error: "Repository unreachable" error.

- **Solution:** Check the URL and network connectivity to the remote repository.
- **RCA:** URL changes or remote repository downtime.

43. Error: Artifacts missing after proxying.

- **Solution:** Rebuild proxy metadata and synchronize.
- **RCA:** Metadata not updated after remote changes.

Upgrades and Migration Issues

44. Error: Upgrade fails with "incompatible database schema."

- **Solution:** Run database migration scripts before upgrading.
- **RCA:** Schema not updated for the new version.

45. Error: Migration from Nexus 2 to Nexus 3 fails.

- **Solution:** Use the official migration tool and validate data.
- **RCA:** Unsupported features or data corruption during migration.

Web UI Errors

46. Error: UI elements not loading.

- **Solution:** Clear browser cache or restart Nexus services.
- **RCA:** Browser incompatibility or stale session data.

47. Error: UI becomes unresponsive under load.

- **Solution:** Scale up resources or optimize the Nexus configuration.
- **RCA:** Overloaded system due to high concurrent requests.

Specific Artifact Issues

48. Error: "Conflict" error during artifact upload.

- **Solution:** Check for duplicate artifacts and resolve version conflicts.
- **RCA:** Duplicate uploads with the same version number.

49. Error: Artifacts not resolved for specific builds.

- **Solution:** Update build tool configurations to point to the correct repository.
- **RCA:** Incorrect repository settings in build tools.

Deployment Issues



50. Error: Deployment pipeline fails with Nexus errors.

- **Solution:** Review pipeline configurations and Nexus credentials.
- **RCA:** Credentials not synchronized or repository URL mismatch.

51. Error: Artifacts deployed to the wrong repository.

- **Solution:** Update the repository settings in the deployment configuration.
- **RCA:** Misconfigured repository target.

Repository Maintenance Issues

52. Error: Repository not accessible during maintenance tasks.

- **Solution:** Schedule maintenance tasks during off-peak hours and notify users.
- **RCA:** Tasks like cleanup and indexing lock repository resources temporarily.

53. Error: Metadata not updated after artifact deletion.

- **Solution:** Rebuild the repository metadata manually.
- **RCA:** Deletion operations didn't trigger metadata refresh.

54. Error: Repository corruption detected.

- **Solution:** Restore the repository from a backup and validate integrity.
- **RCA:** File system errors or abrupt shutdowns during operations.

Artifact Download Issues

55. Error: Clients unable to download artifacts due to "403 Forbidden."

- **Solution:** Verify repository permissions and ensure users have access.
- **RCA:** Misconfigured user roles or group permissions.

56. Error: "Checksum mismatch" during artifact download.

- **Solution:** Clear the repository cache and re-sync with the remote repository.



- **RCA:** Corrupted artifact or metadata inconsistency.

57. Error: Artifact downloads randomly fail with "connection reset."

- **Solution:** Check server logs for network-related errors and optimize the timeout settings.
- **RCA:** Network instability or overloaded server.

Authentication and Authorization Issues

58. Error: LDAP integration failing to authenticate users.

- **Solution:** Validate LDAP server settings in Nexus and test connections.
- **RCA:** Incorrect LDAP server address or port configuration.

59. Error: SAML integration fails during user login.

- **Solution:** Verify SAML provider settings and Nexus SAML configuration.
- **RCA:** Certificate mismatch or misconfigured SAML metadata.

60. Error: User lockout due to repeated failed login attempts.

- **Solution:** Unlock the user account through the Nexus admin panel or CLI.
- **RCA:** Brute-force protection triggered by incorrect credentials.

Build Tool Integration Issues

61. Error: Gradle build fails to resolve Nexus artifacts.

- **Solution:** Update `build.gradle` with the correct repository URL and credentials.
- **RCA:** Incorrect or outdated repository URL in Gradle configuration.

62. Error: Maven build hangs on dependency resolution.

- **Solution:** Enable debug logs to identify the hanging step and clear the local Maven cache.
- **RCA:** Network issues or corrupted Maven local repository.



63. Error: npm fails to fetch packages from Nexus.

- **Solution:** Ensure the correct registry URL is set in `.npmrc`.
- **RCA:** Misconfigured npm registry or missing credentials.

High Availability (HA) Configuration Issues

64. Error: Nexus nodes in a cluster not syncing.

- **Solution:** Verify HA configuration settings and check for network connectivity between nodes.
- **RCA:** Misconfigured cluster settings or firewalls blocking communication.

65. Error: Failover not working in a high-availability setup.

- **Solution:** Ensure load balancer and failover settings are properly configured.
- **RCA:** Load balancer health check misconfiguration.

66. Error: Cluster performance degradation under load.

- **Solution:** Optimize cluster resources and review node scaling strategies.
- **RCA:** Insufficient resources or uneven load distribution among nodes.

Miscellaneous Errors

67. Error: Nexus service crashing intermittently.

- **Solution:** Monitor logs for specific error messages and verify JVM settings.
- **RCA:** Memory leaks or incompatible plugins.

68. Error: Plugin installation fails with "incompatible version."

- **Solution:** Download and install the correct plugin version compatible with Nexus.
- **RCA:** Plugin version mismatch with Nexus version.

69. Error: Nexus UI returns "500 Internal Server Error."

- **Solution:** Check server logs for stack traces and resolve underlying issues.



- **RCA:** Internal server issue, often related to database or file corruption.

Advanced Configuration Errors

70. Error: Custom storage path not recognized.

- **Solution:** Update `nexus.properties` with the correct custom path.
- **RCA:** Incorrect path syntax or missing write permissions.

71. Error: Nexus refuses connections after enabling HTTPS.

- **Solution:** Verify SSL certificate validity and server settings.
- **RCA:** Misconfigured SSL certificates or unsupported ciphers.

Security and Compliance Issues

72. Error: Vulnerability scan fails for Nexus repositories.

- **Solution:** Update Nexus to the latest version and review security configurations.
- **RCA:** Outdated Nexus version or security settings.

73. Error: Unauthorized artifact deployments detected.

- **Solution:** Review audit logs and restrict deployment permissions.
- **RCA:** Insufficient access control.

74. Error: Nexus flagged for storing banned artifacts.

- **Solution:** Identify and remove restricted artifacts.
- **RCA:** Improper artifact vetting during upload.

Backup and Restore Issues (Continued)

75. Error: Incremental backups not capturing all changes.

- **Solution:** Switch to full backups and validate backup jobs.
- **RCA:** Misconfigured backup scripts or jobs.



76. Error: Restore completes with missing repository data.

- **Solution:** Check backup logs and re-run the restore with validation.
- **RCA:** Incomplete or corrupted backup.

Nexus Sonatype IQ Issues

77. Error: Policy violations prevent artifact promotion.

- **Solution:** Adjust policy settings in Sonatype IQ.
- **RCA:** Overly restrictive policies.

78. Error: Scans failing due to timeout.

- **Solution:** Increase scan timeout and allocate more resources.
- **RCA:** Insufficient resources for large artifact scans.

Monitoring and Alerting Issues

79. Error: Monitoring tools not capturing Nexus metrics.

- **Solution:** Enable JMX or Prometheus metrics in Nexus settings.
- **RCA:** Metrics collection not configured.

80. Error: Alerts triggered for false positives.

- **Solution:** Refine alerting rules and thresholds.
- **RCA:** Improper alert configurations.

Compatibility and Legacy Issues

81. Error: Old artifacts incompatible with new tools.

- **Solution:** Rebuild artifacts with updated dependencies.
- **RCA:** Legacy dependencies no longer supported.

82. Error: Nexus fails to migrate legacy repository formats.

- **Solution:** Use migration scripts or tools provided by Sonatype.



- **RCA:** Incompatible repository formats.

Miscellaneous Common Errors

83. Error: Email notifications fail.

- **Solution:** Verify SMTP server settings.
- **RCA:** Incorrect SMTP configuration.

84. Error: Artifact tagging fails.

- **Solution:** Review tag policies and permissions.
- **RCA:** Misconfigured tagging policies.

Network and Firewall Issues

85. Error: Nexus unable to resolve DNS for remote repositories.

- **Solution:** Verify DNS settings on the Nexus server and ensure external DNS is reachable.
- **RCA:** Incorrect DNS configuration or blocked outbound DNS traffic.

86. Error: Firewall blocking artifact upload/download.

- **Solution:** Allow necessary ports (default: 8081) and configure rules to permit Nexus traffic.
- **RCA:** Firewall rules not configured to support Nexus operations.

87. Error: Nexus repository not accessible externally.

- **Solution:** Verify network routes, firewall settings, and NAT configurations.
- **RCA:** Network misconfiguration or incorrect external IP settings.

Proxy Server Integration Issues

88. Error: Nexus unable to connect through a proxy server.

- **Solution:** Update Nexus proxy settings with the correct credentials and host details.



- **RCA:** Misconfigured proxy settings or expired credentials.

89. Error: Authentication error when proxying through NTLM.

- **Solution:** Enable NTLM authentication support in Nexus or switch to basic authentication.
- **RCA:** Proxy server requires NTLM, which may not be supported natively.

Scheduled Task Errors

90. Error: "Task execution conflict" error.

- **Solution:** Stagger overlapping tasks and adjust task schedules.
- **RCA:** Multiple tasks attempting to access the same resources simultaneously.

91. Error: Task stops midway without completing.

- **Solution:** Check logs for resource limitations and increase timeouts.
- **RCA:** Timeouts or insufficient resources for the task.

Blob Store Errors

92. Error: Blob store directory not writable.

- **Solution:** Verify permissions and ownership of the blob store directory.
- **RCA:** Directory ownership or permission issues.

93. Error: "Blob store full" warning.

- **Solution:** Add more storage or configure an external blob store.
- **RCA:** Storage allocation exceeded due to repository growth.

Nexus Search Functionality Errors

94. Error: Search results not displaying recent artifacts.

- **Solution:** Reindex the repository and validate metadata updates.
- **RCA:** Indexing delays or metadata sync issues.



95. Error: "No search results found" for known artifacts.

- **Solution:** Ensure the search term is accurate and verify repository indexing.
- **RCA:** Corrupted or incomplete index.

Remote Repository Caching Issues

96. Error: Cached artifacts not updated after upstream changes.

- **Solution:** Clear cache and force a re-sync with the remote repository.
- **RCA:** Cached metadata not refreshed after upstream modifications.

97. Error: Excessive cache size impacting performance.

- **Solution:** Configure cache retention policies to limit size.
- **RCA:** Cache retention settings not optimized for repository activity.

Database Migration and Maintenance

98. Error: Database migration fails with "unknown schema version."

- **Solution:** Verify Nexus version compatibility and ensure proper migration scripts are applied.
- **RCA:** Using migration scripts incompatible with the current database schema.

99. Error: Database maintenance task fails to complete.

- **Solution:** Increase task timeouts and validate database connectivity.
- **RCA:** Large database size or connectivity issues during task execution.

Repository Deployment Pipeline Issues

100. Error: Deployment pipeline triggers but artifacts are not deployed to Nexus.

Solution: Verify pipeline configurations, Nexus credentials, and repository URLs.

RCA: Incorrect credentials, pipeline misconfigurations, or repository URL mismatch.

