Illumio Core
Compatible PCEs: 21.5.10, 21.5.2, 21.5.1, 21.4.1

Illumio NEN
Version: 2.3.10

Release Notes

Contents

About this Document

These release notes describe the new features, enhancements, resolved issues, and known issues for the Network Enforcement Node (NEN) 2.3.0 and 2.3.10 releases.

The NEN is the Illumio Core switch and Server Load Balancer (SLB) interface that provides visibility and enforcement on switches and SLBs.

See the *NEN Installation and Usage Guide* for information.

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What's New In This Release

To learn what's new and changed in 2.3.10, see *What's New in This Release* in the *Illumio NEN Installation and Usage Guide*.

Product Version

NEN Version: 2.3.10
Compatible PCE Versions: 21.5.10 (LTS Candidate), 21.5.2 (Standard), 21.5.1 (Standard), 21.4.1 (Standard)

Standard versus LTS Releases

For information about Standard versus Long Term Support (LTS) releases, see Versions and Compatibility in the Illumio Support portal (log in required).

Release Types and Numbering

Illumio Core release numbering uses the following format: "a.b.c-d+e"

- "a.b": Standard or LTS release number, for example "2.2"
- ".c": Maintenance release number, for example ".1"

- "-d": Optional descriptor for pre-release versions, for example "preview2"
- "+e": Hot Fix release descriptor, for example "+H1", "+H2", "+H3".

Resolved Issues in NEN 2.3.10

- **Network enforcement log showed exception when switching from node 2 to the primary node** (E-85609)
  On the NEN server, in the network_enforcement.log, an error was shown with an exception message when switching from Node 2 to the primary node. This issue is resolved.
- **Deleting VS policy from the F5 might leave AS3 declare in an unstable state** (E-85489)
  When deleting a VS policy from the F5, the code ignored the response from the AS3 PATCH command and deleted the policy. However, if the AS3 declare PATCH failed, this left the system in a state where subsequent AS3 PATCH commands failed due to an inconsistency with the AS3 declare and the state of the F5. This caused the policy to not be applied. This issue is resolved.
- **Failed to apply policy to a virtual server after NEN upgrade** (E-85412)
  A policy change could generate a 409 error. Policy for the virtual server would then fail to update. This happened because during policy changes, the PCE failed to detect and correct of out-of-sync F5 AS3 declarations and virtual server configuration. The NEN would therefore try to create a policy that already existed. This issue is resolved. A subsequent tamper check fixes the policy for the virtual server.
- **NEN logs DEBUG info in prod level** (E-85363)
  The NEN was not setting the default log level for the production environment correctly, causing DEBUG information to be logged into the `network_enforcement` log.
  This issue is resolved and the NEN now works as expected.
- **Some NEN logs should be at debug level** (E-85341)
  Some logs were growing very large (over 5GB) in a very short time because policy information was mistakenly added to the logs.
  This issue is resolved so that some parts of that information are added at DEBUG log level instead of INFO log level, while some parts (such as PNports info) are not added to the log.
- **Discovery loop not working on NEN2.2.0 in production environment** (E-85307)
  The discovery job was sometimes not working properly. It did discovery, but for only one SLB. The symptom was increased Ruby gems errors in logs. The issue was caused by an insufficient number of database connections in the pool. The issue is resolved. The default number of connections in the database pool is increased from 4 to 50.
- **NEN health status could display incorrect cluster status** (E-85301)
  Running the `illumio-nen-ctl health` command could provide incorrect information for the NEN HA cluster in the Cluster Mode field. For example, the command output could incorrectly display "Standalone (split brain)" when the NEN service on one of the nodes was stopped. The field should have displayed "Standalone (failover)." This issue is resolved and the Cluster Mode field now displays the correct information.

- **NEN - Failover not working if NEN primary freezes** (E-85256)
  The NEN primary node could stop logging unexpectedly because of an unforeseen event such as a full disk. The lack of logs made the node appear frozen, but the NEN was still running, so the NEN secondary node did not take over. However, if the disk on the primary node got full and caused the database and node to fail, the primary node would fail, and then failover to the secondary node would occur. This issue is resolved. To address the disk full issue and the lack of logging, if a disk gets 95% or more full, the node will now be stopped, and the NEN fails over to the other node.
- **NEN didn't delete empty iRule and create a new non-empty rule** (E-85211, E-84872)
  iRules are a feature within the F5 BIG-IP local traffic management (LTM) system. An iRule can become empty due to tampering. If the NEN detects that an iRule is empty, it's supposed to delete it and then create a new non-empty rule. In this case, the NEN failed to delete the empty iRule and create a new non-empty rule. This issue is resolved.
- **Policy updates and tampering check weren't working** (E-85197)
  When the NEN service on the primary node of a NEN HA cluster was stopped, the secondary NEN node did not apply policy updates that the primary node was processing when the primary node failed. This issue is resolved. The secondary NEN node now correctly applies the policy updates from the primary node when it failed over.

Known Issues in NEN 2.3.10

There are no known issues in this release.

Resolved Issues in NEN 2.3.0

> ⚠ NEN 2.3.0 was a Limited Availability (LA) release. However, these issues are also resolved in NEN 2.3.10.

- **PCE and NEN became stuck in a provisioning loop** (E-84712)
  Implementing an actor-only policy change caused a provisioning loop in which the PCE continually sent the same policy to the NEN which in turn applied it continually to the F5 SLB. The loop was reported in the network_enforcement log and F5 logs. This problem occurred because actor-only policy changes lack a rule version and NENs don't store or acknowledge policy changes that lack a rule version. This issue is fixed. Now, NENs that receive actor-only policy changes use the last-stored rule version from their database, allowing these NENs to acknowledge such policy changes to the PCE.
- **Full policy update not performed on tampered DVSs** (E-84614)
  When a NEN was triggered to perform a tampering check on Discovered Virtual Servers

(DVS), a full policy update didn't occur and only the address list was updated. This issue is fixed: tampered DVSs now receive a full policy update.

- **Maximum number of auth tokens exceeded** (E-84573)
  The error *maximum active login tokens* occurred when too many F5 authentication tokens where generated in a 20 minute period. Prior to this fix, a new F5 authentication token was generated whenever a Discovered Virtual Server (DVS) was unprogrammed (for example, when its status changed to unmanaged) or was reprogrammed (for example, when it was identified as tampered). This issue is fixed. NENs now use a single token for these actions.

- **Primary NEN node would hang in some cases** (E-84111)
  A logging problem that occurred in the `network_enforcement` service caused the primary NEN node in an HA cluster to hang, which was subsequently not recognized by the secondary NEN node. This issue is fixed. The primary NEN node can now tolerate logging issues that occur during the `network_enforcement` service and the Secondary NEN node now recognizes when the Primary node hasn't sent its status to the PCE for 3 minutes.