

OpenNMS Release Notes

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What's New in OpenNMS Horizon 27

System Requirements

- **Java 8 through 11:** OpenNMS Horizon 27 runs on JDK 8 through 11. We recommend the most recent version of OpenJDK 11.
- **PostgreSQL 10 or higher:** Horizon 27 requires any supported version of PostgreSQL from 10 up to (and including) 13.

Breaking Changes

Remote Poller Removed

The remote poller has been removed from Horizon 27. It has been replaced with new infrastructure for [perspective-based monitoring](#) that runs on Minions.

VMware Assets

VMware-related data is not longer stored in node assets. The `install` command will move any existing VMware asset data to the node's metadata when you upgrade.

New Features and Improvements

Karaf Shell

A number of useful commands have been added or updated in the Karaf shell.

- `alarm-list`: list current alarms (optionally filtered by UEI)
- `event-list`: list events (optionally filtered by UEI)
- `ip-addr-range`: generate a list of IP addresses to use in other commands
- `reload-daemon`: now accepts an optional configuration file to target for reload
- `send-event`: additional options supported to match the CLI version of `send-event` more closely
- `snmp-fit`: can now optionally send a `newSuspect` event on success
- `snmp-get`: like `snmp-walk`, but fetches a single MIB object and prints the result

Minion and Sentinel

- The Minion `confd` configuration support now handles a bunch more options, including setting Jetty, RMI, and ssh host and port, Secure Credentials Vault configuration, and environment variables and options for the JVM. For details, see [the CONFD_README file](#).
- It's now possible to override entries in a Sentinel's `system.properties` with a file called `custom.system.properties`

Application Perspective Monitoring

Application Perspective Monitoring replaces the old Remote Poller.

It uses the Minion infrastructure to monitor a service's availability from these different perspectives. When a service is not responsive an outage will be generated with the corresponding perspective.

A number of provisioning, polling, and web UI changes have been made to accommodate this new infrastructure.

Provisioning

- Node scan has been updated to limit the number of concurrent RPC requests so as not to overload communication with Minions.
- New policies have been added for creating node and interface metadata during provisioning.

Polling and Monitoring

- WMI/SMB support has been updated to use a wider set of encryption types.
- Data collection configuration has been added for Netscaler vServer.

Thresholding

- It is now possible to use metadata in threshold evaluation.

RPC, Telemetry, Flows, and BMP

- Improvements have been made for supporting aggregate flow metrics.
- Flow DNS enrichment has been enhanced to improve performance.
- Aggregate flow queries now support resolving hostnames if available.
- Sink RPC APIs have been enhanced to expose metrics to Karaf for tracing and performance tuning.
- The OpenConfig integration now supports gNMI, in addition to JTI.

Notifications

- It is now possible to use node-, interface-, and service-level metadata in notifications.

ReST API

- Events for `applicationCreated/applicationDeleted` are now sent when applications are added or removed through the ReST API.
- A new v2 API for retrieving application status has been added.

Web UI Improvements

- A new universal search bar has been added which allows for searching alarms, nodes, and more from the top of any page in the UI.

Documentation Updates

Documentation improvements and additions have been made in a number of areas:

- Application Perspective Monitoring
- Data Collection Configuration
- Metadata
- Mail Transport Monitor
- Minion/Kafka RPC Tuning
- Thresholding
- Users Configuration, Duty Schedules, and Security Roles

...plus TONS of smaller readability improvements.

Important Internal Changes

- Sink internals have been updated to use Protobuf 3.

Changelog

Release 27.0.1

Release 27.0.1 is the second release in the Horizon 27 series.

It contains a number of bugfixes including a critical CVE fix for Jetty, as well as a number of other smaller changes and improvements.

The codename for 27.0.1 is *Pan-Galactic Gargle Blaster*.

Bug

- No support for TLS v1.3 in MailTransportMonitor (Issue [NMS-12733](#))
- Timezone inconsistency when generating PDF reports from Grafana dashboards (Issue [NMS-12930](#))
- RRD files for SNMP data are not created until a Service Restart (Issue [NMS-12974](#))
- Nephron Stability Issues at Scale (Issue [NMS-12975](#))
- typo in BMP sample (Issue [NMS-12984](#))
- Upgrade script does not migrate VMware metadata (Issue [NMS-12985](#))
- VMware datacollection failed (Issue [NMS-12986](#))
- Monitoring VMware VMs and hosts stopped working in 27.0.0 (Issue [NMS-12988](#))
- Unable to enable Jaeger tracing in Sentinel (Issue [NMS-12998](#))
- Update typo in BMP docs (Issue [NMS-13002](#))
- CVE-2020-27216: Jetty webserver vulnerability (Issue [NMS-13009](#))
- JCifs leaks memory after upgrade (Issue [NMS-13011](#))
- When using a custom prefix, the Elasticsearch Forwarder for events and situation-feedback creates a wrong template. (Issue [NMS-13017](#))
- Check flow sequence numbers to detect missing packets (Issue [NMS-13024](#))

Enhancement

- Add gNMI support for OpenConfig (Issue [NMS-12915](#))
- TSS: Cortex Plugin: Use REST API for reading timeseries (Issue [NMS-12938](#))
- sFlow Ingress / Egress (Issue [NMS-12955](#))
- Provisioning introduction (Issue [NMS-12994](#))
- Document Configure Discovery process (Issue [NMS-12995](#))

- Document requisition process (Issue [NMS-12996](#))
- backport Minion certificate management to Horizon 27 (Issue [NMS-13000](#))
- flowStartMilliseconds/flowEndMilliseconds for NetFlow v9 (Issue [NMS-13006](#))
- Add clock skew correction mechanism (Issue [NMS-13023](#))

Release 27.0.0

Release 27.0.0 is the first release in the Horizon 27 series.

It is a major enhancement release with many bug fixes and a ton of new features, most notably the removal of the Remote Poller in favor of a new Minion-based workflow called Application Perspective Monitoring.

The codename for 27.0.0 is *Zaphod*.

Bug

- Investigate if the InstallerDB could be replaced with something simpler (Issue [NMS-12079](#))
- Limit RPC threads on Minion using bulkhead pattern (Issue [NMS-12391](#))
- RRD-to-Newts converter only handles AVERAGE RRAs (Issue [NMS-12722](#))
- Fix docs warnings for resource-types, time series config and thresholding (Issue [NMS-12770](#))
- Traps Not Associated With Node (Issue [NMS-12797](#))
- Netflow timestamps incorrectly calculated on interfaces with MPLS (Issue [NMS-12800](#))
- SNMPv3 Traps Cause Errors From Single Node to Minion (Issue [NMS-12802](#))
- Hardcoded path to bash (Issue [NMS-12840](#))
- Remote Poller: add remote outages to UI (Issue [NMS-12842](#))
- Remote Poller: add remote polling details to service page (Issue [NMS-12843](#))
- Remove polling package selection from application (Issue [NMS-12844](#))
- Remote Poller: remove not longer used role ROLE_REMOTING (Issue [NMS-12849](#))
- Remote Poller: remove references to old remote poller from documentation (Issue [NMS-12850](#))
- Remote Poller: remove scanreports UI and ReST endpoint (Issue [NMS-12851](#))
- Remote Poller: remove old Distributed Status Summary UI (Issue [NMS-12852](#))
- Incorrect TSS settings (Issue [NMS-12862](#))
- Remote Poller: Fix event definition for remote poller nodeLostService events (Issue [NMS-12871](#))
- Remote Poller: NPE while attempting to start RemotePollerNG (Issue [NMS-12877](#))
- Unable to install feature 'dominion-grpc-client' (Issue [NMS-12880](#))
- Remote Poller: Clear outages after removing from application (Issue [NMS-12881](#))
- Perspective Poller shows in tracing as RemotePollerNG (Issue [NMS-12882](#))
- Application Perspective Monitoring: NPE when starting OpenNMS (Issue [NMS-12887](#))

- Application Perspective Monitoring: OpenNMS refuses to start if service is referenced by two applications (Issue [NMS-12889](#))
- Telemetry: a lot of InstanceAlreadyExistsExceptions when starting OpenNMS with default configuration (Issue [NMS-12896](#))
- Update link to In Memory TS DB (Issue [NMS-12912](#))
- Unable to poll Vcenter CIM - Calling something in OpenJDK11 that has been removed. (Issue [NMS-12919](#))
- Application link on start page redirects to start page (Issue [NMS-12921](#))
- Event Translator debug logging is incorrect (Issue [NMS-12959](#))
- service starts / restarts work but spit out an error if configured to wait for startup (Issue [NMS-12966](#))
- Display the alarm status correctly in topology map for applications (Issue [NMS-12968](#))
- Topology Application Map: Outage Table: Clicking on a service should show the outages of the service (Issue [NMS-12970](#))
- Alarm (v1 & v2) ReST Service PUT Can't PUT Multiple Things (Issue [NMS-12979](#))

Enhancement

- Add custom string attributes based on indirect and complex SNMP Indices (Issue [NMS-8484](#))
- Trailing ", \" in report definitions throws not helpful error message (Issue [NMS-10526](#))
- nodeDeleted event should contain more information (Issue [NMS-10554](#))
- Netscaler vServer SNMP collection and graph definitions (Issue [NMS-12269](#))
- Upgrade Sink API to Proto3 (Issue [NMS-12602](#))
- Add selenium test for password change (Issue [NMS-12645](#))
- Re-enable Central Search functionality (Issue [NMS-12646](#))
- Remove remote-poller runtimes from the build (Issue [NMS-12653](#))
- Update remote-poller model to link service to locations instead of individual RPs (Issue [NMS-12654](#))
- Rewrite the remote poller backend to use Minion (Issue [NMS-12655](#))
- Dynamic service scheduling: Service lifetime (Issue [NMS-12676](#))
- Dynamic service scheduling: Polling package association (Issue [NMS-12677](#))
- Dynamic service scheduling: Poller-Configuration change (Issue [NMS-12678](#))
- Update database and send events only on status changes (Issue [NMS-12679](#))
- Get new remote poller running as daemon (Issue [NMS-12683](#))
- Add upgrade task to enable RemotePollerNG (Issue [NMS-12684](#))
- Confd templates for Minion configuration (Karaf) (Issue [NMS-12687](#))
- Support hostnames resolution when using aggregated flows (Issue [NMS-12692](#))
- Use CollectionSetBuilder to persist response times (Issue [NMS-12698](#))

- Create SQL index for optimizing poll result lookups (Issue [NMS-12710](#))
- Apply thresholding for remote poller response times (Issue [NMS-12721](#))
- Meta-data tag enhancements to Time Series Storage API (Issue [NMS-12730](#))
- remove the java ("windows") installer (Issue [NMS-12742](#))
- Add ReST interface for Remote Poller (Issue [NMS-12760](#))
- Anomaly Detection Experiment (Issue [NMS-12773](#))
- Anomaly Detection - Get the consumer working (Issue [NMS-12774](#))
- Migrated VMware asset data to metadata entries (Issue [NMS-12781](#))
- RemotePoller: only schedule services that are part of an application (Issue [NMS-12785](#))
- Use newer protocol versions for remote DCOM WMI (Issue [NMS-12788](#))
- Add support for OpenConfig Service in Detector/Poller (Issue [NMS-12789](#))
- Remote Poller: Add outages for remote poller status changes (Issue [NMS-12792](#))
- Add support for meta-data on single-DS threshold definitions (Issue [NMS-12794](#))
- Update Users chapter (Issue [NMS-12809](#))
- Remote Poller: Modify model to new structure (Issue [NMS-12820](#))
- Remote Poller: Change monitoring locations UI to reflect model changes (Issue [NMS-12821](#))
- Remote Poller: Change Admin UI to reflect Application model changes (Issue [NMS-12822](#))
- Application Topology Provider Status (Issue [NMS-12823](#))
- Allow meta-data in notifications (Issue [NMS-12827](#))
- Add events for new Application Model (Issue [NMS-12838](#))
- Remote Poller: camel case in new column definitions causing problems (Issue [NMS-12841](#))
- Remote Poller: Remove LocationSpecificStatus (Issue [NMS-12859](#))
- Remote Poller: Documentation (Issue [NMS-12860](#))
- Remote Poller: Fix the remote flag (Issue [NMS-12861](#))
- Remote Poller: Cleanup (Issue [NMS-12864](#))
- Remote Poller: Clarify perspective labeling (Issue [NMS-12865](#))
- Remote Poller: Details pages show remote outages in recent outages list (Issue [NMS-12866](#))
- Remote Poller: Add graph definitions for response times (Issue [NMS-12868](#))
- Remote Poller: Add distributed tracing (Issue [NMS-12869](#))
- Remote Poller: Rename to Perspective Poller (Issue [NMS-12874](#))
- Remote Poller: Make backend more resilient (Issue [NMS-12878](#))
- Application Perspective Monitoring: create Application status page (Issue [NMS-12886](#))
- Document the MailTransportMonitor (Issue [NMS-12892](#))
- Additions to Application Perspective Monitoring docs (Issue [NMS-12893](#))
- Filter outages table in Application Topology View (Issue [NMS-12897](#))

- Add logging configuration for Perspective Poller (Issue [NMS-12910](#))
- Allow to navigate to monitored items in application status view (Issue [NMS-12913](#))
- Allow setting meta data in a requisition (Issue [NMS-12918](#))
- Create a report that matches Horizon 27.0.0 Jira issues with merged pull requests in GitHub (Issue [NMS-12922](#))
- Update Copyright notice for 2020 (Issue [NMS-12933](#))
- SSLCertMonitor should include more details about the expir(ing|ed) certificate in reason codes (Issue [NMS-12948](#))
- Update Maximum PostgreSQL to allow PostgreSQL 13 (Issue [NMS-12958](#))
- Create Horizon 27 Release Notes (Issue [NMS-12961](#))
- Identify message broker strategies in web "about" page (Issue [NMS-12971](#))