

# Release Notes

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Paragon Active Assurance Control Center Release 3.1.0

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# Introduction

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Paragon Active Assurance is a programmable test and service assurance solution using software-based and traffic-generating Test Agents, easily used and delivered from the cloud as a SaaS solution or deployed on-premise in NFV environments.

These release notes accompany Release 3.1.0 of Paragon Active Assurance Control Center and detail its new features.

Build numbers:

- Test Agent Appliance: 3.1.0.37
- Test Agent Application: 3.1.0.19
- Plugins: 3.1.0-157

A list of bug fixes is also provided as well as descriptions of limitations and known problems.

These release notes are available on the Paragon Active Assurance Documentation Web page at [https://www.juniper.net/documentation/product/en\\_US/paragon-active-assurance](https://www.juniper.net/documentation/product/en_US/paragon-active-assurance).

## General Notes

Please note that not all features of Paragon Active Assurance are available to every customer; rather, availability is dependent on what product or service has been purchased.

# Upgrading to This Version

- In this version, an additional plugin package needs to be installed. For details, see the *Upgrade Guide*.
- This version replaces Python 2 with Python 3. This change, as well as the introduction of plugins, requires updating of the Apache site files, found in the directory `/etc/apache2/sites-available`. Please note that the upgrade procedure by default does not replace the old files, but rather keeps the old files alongside the new ones (which have a package suffix). You therefore need to actively adopt the new site files for the system to operate properly.
- This version introduces a new configuration file `/etc/netrounds/plugin.yaml`. During installation, this file needs to be updated with the correct database connection details if the latter have been changed from the default.
- Backup procedures need to be extended to cover the new technologies introduced in this version. For full details, see the *Lifecycle Management Guide*, chapter "Backing Up Product Data".

## New and Changed Features

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## Streaming API

A streaming API and client have been added to Paragon Active Assurance. This API allows export of all data in Paragon Active Assurance to an external system. Data streaming is managed by the well-known and highly scalable Kafka event streaming platform.

Using the streaming API is optional, and it is offered only for on-premise Control Center installations.

Please note that the streaming API has only been tested with up to 15,000 streams.

## Test Agent on Raspberry Pi

Paragon Active Assurance supports installation of Test Agent Applications on Raspberry Pi platforms.

## Test Agent for ARM Architecture

Paragon Active Assurance supports installation of Test Agent Applications on ARM processor hardware (32-bit and 64-bit architectures). These Test Agents work identically to the 64-bit AMD versions which have been previously (and are still) offered.

## DNS Testing with Test Agent Application

The DNS test and monitor task has been implemented for Test Agent Applications. It works the same way as for Test Agent Appliances.

## Two Configurable TWAMP Percentiles

It is now possible to specify and present two *percentiles* for TWAMP delay values to get a clearer view of their distribution. Commonly used percentiles include the 90th and 99th, which mean, respectively, "90% (99%) of the data points are below this value". The percentiles in Paragon Active Assurance are however freely configurable.

## Configurable Sender Port for TWAMP

A sender (source) port can optionally be set for a TWAMP reflector in the Paragon Active Assurance inventory. If no sender port is set, the system will use a random port as before.

This is useful for reflectors that require test and source ports to be known in advance.

## Sharing Test and Monitor Results via URLs

Paragon Active Assurance already has a mechanism for sharing measurement results (and more) between accounts. This has now been supplemented by a function for sharing test and monitor results via URLs.

Such a function is essential in a scenario with multiple Control Centers. It is also handy for sharing data with an external party that does not have an account in Paragon Active Assurance. The shared view of a test or monitor is stripped of account-specific details.

## Moving a Test Agent to a Different Control Center

If you have multiple Paragon Active Assurance Control Centers deployed, you can now move a Test Agent permanently from one Control Center to another by a simple action in the Control Center GUI. You specify the new Control Center host, the port to connect to, and the new credentials.

## Offline Registration of Test Agents

In certain situations, especially when deploying a large number of Test Agents, you may find it convenient to first preconfigure the Test Agents with registration details without being dependent on network connectivity, and register them only later. This can now be done using an "Offline registration" utility in the Test Agent local console.

## Test Agent Application: Register and Start in One Command

When installing a Test Agent Application as a native app in Linux, you can use a new shortcut (`register-run` command) which first registers the Test Agent with Control Center and then starts it.

## Dynamic Plugins

Plugins are used by Test Agent Applications to execute test and monitoring tasks. It is now possible to upload new plugins for use dynamically, that is, in between releases, and also to switch more easily between different versions of a particular plugin.

## Improved Dashboard Rendering Performance

To speed up the presentation on the Control Center dashboard for large sets of monitors, the monitor list is now by default sorted by a precomputed and cached 15-minute SLA indicator. SLA indicators for other time intervals can be displayed in parallel on the dashboard.

## DNS: Request Lifetime Expiry Reporting

A new DNS KPI, "ES lifetime", keeps track of how often no DNS response was obtained before the "Request lifetime" period expired. Contrasting this with the "ES response" KPI, you can distinguish late responses from instances where no response was received at all.

## Tech Preview: TimescaleDB

**NOTE:** This feature is made available in version 3.1.0 as a tech preview. This means that it is offered for customers to inspect and explore, while Juniper Networks does not guarantee satisfactory performance and does not take responsibility for malfunctions or data loss. By default the feature is disabled.

A TimescaleDB time-series database is introduced in Paragon Active Assurance to provide enhanced ingestion performance and scalability. More specifically, it enables connecting an external dashboard and retrieving metrics.

Saving data in the TimescaleDB database is optional; please note that if you turn this on, data will be saved in two places in parallel. The long-term plan for data storage in Paragon Active Assurance is for TimescaleDB to replace the existing time-series database.

TimescaleDB is offered only for on-premise Control Center installations.

## Deprecated Features

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# Authentication Using TACACS+

Authentication by means of TACACS+ is no longer supported. Going forward, Paragon Active Assurance supports authentication using LDAP.

## Known Issues

This section lists issues that are known to remain in this release.

- NF-7567 Errors and warnings occur during installation of Control Center, for example, "N: Download is performed unsandboxed as root as file ...". Note that the installation is completed successfully in spite of this. (P3 - Medium)

## Resolved Issues

This section lists limitations that are resolved with this release. The priority of each issue is also indicated.

- ND-5235 Test Agent OVA image enforced throttled CPU settings in VMware, causing bad performance (P2 - High)
- ND-5512 Test Agent Application UDP plugin crashed when many UDP streams were configured (P2 - High)
- NF-5847 Test Agent Appliance failed to apply interface configuration with /31 subnet (P2 - High)
- NF-6275 Ethernet service activation tests not visible in Control Center despite the SAT feature being present in the license (P2 - High)
- NF-6895 Not possible to modify an existing monitor with a REST PUT (P2 - High)
- NF-7156 Running a large number of TWAMP streams with Test Agent Application caused the database to run out of connections (P2 - High)
- ND-5124 Test Agent Application in a Docker container did not automatically detect new network namespaces once started (P3 - Medium)

- ND-5177 Failure trying to configure the management interface on a Test Appliance from the local console in specific upgrade scenario (P3 - Medium)
- ND-5199 DSCP was evaluated for both directions in bidirectional UDP streams even if evaluation had been configured for one direction only (P3 - Medium)
- ND-5306 Test Agent Appliance failed to boot on HP Gen10 server (P3 - Medium)
- ND-5466 Problems sending Wi-Fi interface configuration from Test Agent Appliance to Control Center (P3 - Medium)
- ND-5640 Test Agent Appliance failed to boot on HP Gen9 server (P3 - Medium)
- NF-4071 Monitor did not always show the most severe log message (P3 - Medium)
- NF-5874 DSCP mismatch message had severity level "log" instead of "warning" (P3 - Medium)
- NF-6111 Test Agent Appliance did not always synchronize removal of network interface cards with Control Center (P3 - Medium)
- NF-6206 An unreachable Test Agent would sometimes block other tasks in the same monitor (P3 - Medium)
- NF-6254 Control Center did not always log when running out of available PostgreSQL connections (P3 - Medium)
- NF-6262 Test Agent Utils tab in Control Center got stuck in status "Waiting for results" in a highly loaded system (P3 - Medium)
- NF-6280 Following license activation, customers who upgraded the system from a 2.x release and had procured additional features did not receive the new features (P3 - Medium)
- NF-6472 Test Agent Application interfaces were missing on the "Interfaces (metadata)" tab if interfaces without IP were present (P3 - Medium)
- NF-6551 HTTP 500 error returned when fetching some monitors via REST (P3 - Medium)
- NF-6848 Some logs were missing in scenarios with many concurrent tasks (P3 - Medium)
- NF-6875 Test Agent Application unable to connect to Control Center using a plain IPv6 address instead of DNS name (P3 - Medium)
- NF-6876 Test Agent Application kept receiving measurement requests from Control Center after completing test (P3 - Medium)
- NF-6914 Control Center troubleshooting report could not be generated with CLI command (P3 - Medium)

- NF-6937 Test Agent utils Ping, Traceroute, and ARP/NDP table stuck in "Waiting for results..." in a highly loaded system (P3 - Medium)
- NF-7082 Incorrect log level message for overload in UDP Loopback tool (P3 - Medium)
- NF-7274 Test Agents occasionally registered and appeared in Control Center with an empty interface list (P3 - Medium)
- NF-7283 Test Agent TWAMP reflector setup failed for Test Agent Application when using Source Port configuration (P3 - Medium)
- ND-5331 Outdated contact email shown in the help for the Test Agent Application (P4 - Low)
- ND-5510 Test Agent Application HTTP tool did not report destination IP address (P4 - Low)
- NF-4907 Login banner in Control Center GUI displayed without proper formatting (P4 - Low)
- NF-5323 Generation of PDF report for test failed for a specific report template (P4 - Low)
- NF-5341 "No route to host" warning given without context stating what Test Agent had no route (P4 - Low)
- NF-5366 Upper limit on number of "worst streams" for PDF reports was not used by REST API (P4 - Low)
- NF-5367 Test canceled by the user was tagged with the same icon as failed tests in the Tests view (P4 - Low)
- NF-5851 Parts of Control Center GUI not rendered properly when GMT time zone set (P4 - Low)
- NF-5865 REST GET method for Speedtest did not allow filtering on time period from which to get results (P4 - Low)
- NF-5938 HTTP 404 "Not found" screen nearly unreadable because of bad color scheme (P4 - Low)
- NF-6000 Streams were counted twice for license usage in some scenarios (P4 - Low)
- NF-6006 Non-valid license files were handled without showing a proper error (P4 - Low)
- NF-6024 Interface IP addresses were not sorted in interface selection drop-down (P4 - Low)
- NF-6032 Enabling proxy support on Test Agent consumed a stream that counted towards the license limit (P4 - Low)
- NF-6130 Subscription expiration message contained references to Netrounds and a Netrounds email address (P4 - Low)
- NF-6172 Some Swagger UI links to online help pages were faulty (P4 - Low)

- NF-6175 Filtering Test Agents on online status in the inventory GUI failed to load (P4 - Low)
- NF-6177 Names of monitor templates were displayed outside their respective puzzle pieces and were unreadable (P4 - Low)
- NF-6181 Custom time selector on dashboard used wrong time zone when the time zone in the user profile differed from the one where the computer currently resided (P4 - Low)
- NF-6220 Error when creating an account without an active license (P4 - Low)
- NF-6281 Save/Cancel buttons shown partly outside the boundary of the Alarm Template dialog (P4 - Low)
- NF-6331 Wrong font for online help: Times New Roman instead of LatoWeb (P4 - Low)
- NF-6337 Online help in PDF format had Netrounds logo on first page (P4 - Low)
- NF-6436 Lingering references to @netrounds.com email addresses (P4 - Low)
- NF-6444 Puzzle pieces representing tasks shrank when hovered over (P4 - Low)
- NF-6492 Running ncc command with no arguments returned an error. – This now prints the command help instead (P4 - Low)
- NF-6532 GUI page for managing API tokens used inconsistent presentation logic (P4 - Low)
- NF-6577 "Hide empty" option in monitor results table view did not hide empty rows (P4 - Low)
- NF-6616 Link to Privacy statement on login screen was incorrect (P4 - Low)
- NF-6636 Test Agent error from HTTP tool not properly formatted in GUI (P4 - Low)
- NF-6765 PDF version of online help had Netrounds copyright notice in footer (P4 - Low)
- NF-6860 Online help in PDF download format did not have the correct product name (P4 - Low)
- NF-6871 Unknown error when trying to deselect interface for Live remote packet capture app (P4 - Low)
- NF-6918 Control Center GUI stated that Test Agent Application supports only TCP, UDP, and TWAMP (P4 - Low)
- NF-6938 Periodic reports on tests/monitors used incorrect styling templates (P4 - Low)
- NF-7044 Poor formatting of error messages produced by ncc command (P4 - Low)
- NF-7169 The logging for the REST API occasionally resulted in incorrect information (P4 - Low)
- NF-7261 Welcome email included obsolete content and references. – Sending of this email has been discontinued (P4 - Low)

- NF-6015 Perpetual licenses were shown as expired when running `ncc license status` command (P4 - Low)