Foundation and CloudScape Release Notes

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<td>Version 10.2</td>
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<td>Version 9.1</td>
<td>May 18, 2018</td>
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</tr>
<tr>
<td>Version 9.0</td>
<td>May 16, 2018</td>
<td>27</td>
</tr>
<tr>
<td>Version 8.1</td>
<td>May 10, 2018</td>
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</tr>
<tr>
<td>Version 8.0</td>
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<tr>
<td>Version 7.0</td>
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<tr>
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<td>January 16, 2018</td>
<td>31</td>
</tr>
<tr>
<td>Version 3.0</td>
<td>December 21, 2017</td>
<td>31</td>
</tr>
</tbody>
</table>
April 7, 2021

Released April 7, 2021

**New Feature**

**Debian-Based FlexDeploy Virtual Appliance**

This release includes the initial release of a Debian-based FlexDeploy virtual appliance.

March 25, 2021

Released March 25, 2021

**New Feature**

**Setting to Ignore Linux 'df' Errors**

An optional RN150 setting was added to ignore Linux 'df' errors (such as NFS 'Stale file handle'). This was tracked in ISSUE-588.

**Resolved Issue**

The following issue was resolved in this release.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-563</td>
<td>Increase system-wide process limits on RN150.</td>
</tr>
</tbody>
</table>

March 11, 2021

Released March 11, 2021

**Resolved Issues**

The following issues were resolved in this release.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-537</td>
<td>Make WMI collection more robust when using non-domain credentials.</td>
</tr>
</tbody>
</table>
March 1, 2021

Released March 1, 2021

New Feature

Additional Google Cloud Regions Added to Cost Analytics

Additional Google Cloud regions have been added to cost analytics. This was tracked in ISSUE-463.

Resolved Issues

The following issues were resolved in this release:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-508</td>
<td>Updated documentation links.</td>
</tr>
<tr>
<td>ISSUE-371</td>
<td>Improved the behavior of “lost/regained authorization” tags.</td>
</tr>
<tr>
<td>ISSUE-480</td>
<td>Fix asset timeseries graph failing to fully display after a large number of rescans.</td>
</tr>
<tr>
<td>ISSUE-423</td>
<td>Improve performance of stack membership changes.</td>
</tr>
<tr>
<td>ISSUE-541</td>
<td>Hasten the update of stack names in dependency data.</td>
</tr>
</tbody>
</table>

January 11, 2021

Released January 11, 2021

New Features

Updated Verbiage in Technical Support Widget

The verbiage in the technical support widget was updated. This was tracked in ISSUE-435.
Updated API Documentation Link
The link to the API documentation on the subscription admin page was updated. This was tracked in ISSUE-417.

Resolved Issues
The following issue was resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-395</td>
<td>Update to SNMP performance collection.</td>
</tr>
</tbody>
</table>

December 18, 2020
Released December 18, 2020

New Features

AIX Lsof Failover Feature Flag Enabled
The AIX Lsof failover feature flag was enabled. This was tracked in ISSUE-405.

Resolved Issues
The following issue was resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-437</td>
<td>RN150 migration feature to utilize configured proxy on the original appliance.</td>
</tr>
</tbody>
</table>

December 3, 2020
Released December 3, 2020

Resolved Issues
The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-387</td>
<td>Fix for assessments with IaaS not matching on Azure Central for some servers.</td>
</tr>
<tr>
<td>ISSUE-397</td>
<td>Do not show the View Now button for reports it does not apply to.</td>
</tr>
<tr>
<td>ISSUE-401</td>
<td>Update the help widget so that it does not allow for creation of empty tickets.</td>
</tr>
</tbody>
</table>
November 17, 2020

Released November 17, 2020

New Features

RN150 CentOS to Debian Migration
RN150 CentOS to Debian migration is now supported. This was tracked in ISSUE-89.

Update to Cloud Pricing
There has been an update to cloud pricing. This was tracked in ISSUE-278.

Resolved Issues
The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-317</td>
<td>SNMP passwords required to be at least 8 characters.</td>
</tr>
<tr>
<td>ISSUE-330</td>
<td>Do not allow Windows domain as part of username.</td>
</tr>
<tr>
<td>ISSUE-331</td>
<td>Reject assessment activations using an existing appliance PSK.</td>
</tr>
<tr>
<td>ISSUE-366</td>
<td>Fix issue when non-standard shell is set up for Linux collection user on client machine.</td>
</tr>
<tr>
<td>ISSUE-352</td>
<td>Fix Customer Success help button in portal.</td>
</tr>
</tbody>
</table>

October 29, 2020

Released October 29, 2020

New Features

NTP Support
NTP is now enabled by default on RN150 image. This was tracked in ISSUE-219.

Resolved Issues
The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-302</td>
<td>Properly associate inventoried database to VM host in the absence of OS creds.</td>
</tr>
<tr>
<td>ISSUE-283</td>
<td>Cloud cost views backing data updates in a timely manner on FlexDeploy.</td>
</tr>
</tbody>
</table>
October 21, 2020

Released October 21, 2020

Resolved Issues

The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-219</td>
<td>Properly display errors in RN150 web interface if they are encountered when enabling/disabling NTP.</td>
</tr>
</tbody>
</table>

October 15, 2020

Released October 15, 2020

New Features

NTP Support

NTP support on appliances was established. This was tracked in ISSUE-219.

Documentation Links Updated

Documentation links were updated to the new location. This was tracked in ISSUE-140.

Core Optimized IaaS Matches in Cloud Cost Views

An option to choose core optimized IaaS matches in Cloud Cost views was provided. This was tracked in ISSUE-230.

Advanced Rulesets Table Expanded

The Advanced Rulesets table was expanded to make it easier to use. This was tracked in ISSUE-75.

Resolved Issues

The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-281</td>
<td>Fixed issue where deviceId credtag mapping report data failed to insert into database.</td>
</tr>
<tr>
<td>ISSUE-244</td>
<td>Fixed display issue on Licensing page.</td>
</tr>
<tr>
<td>ISSUE-269</td>
<td>Fixed issue where selection of incorrect device identifier was causing some database servers to be displayed incorrectly in the Database Report.</td>
</tr>
</tbody>
</table>
October 8, 2020
Released October 8, 2020

**New Features**

**Credential Tag to Device Mapping Report**
A credential tag to device mapping report is now available upon request. This was tracked in ISSUE-179.

**Populating Routes as Subnets is Now Optional**
You can now make populating routes as subnets optional. This was tracked in ISSUE-182.

**Resolved Issues**
The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-265</td>
<td>Fixed issue where Export button was not appearing on Device Details page for FlexDeploy.</td>
</tr>
</tbody>
</table>

October 1, 2020
Released October 1, 2020

**New Features**

**Populating Routes Collected from Routers Can Be Made Optional**
You can now make populating routes collected from routers optional. This was tracked in ISSUE-182.

**Credential Tag-to-Device Mapping Report**
A credential tag-to-device mapping report is now available upon request. This was tracked in ISSUE-179.

**MS SQL Server Edition Report**
An MS SQL Server edition report is now available upon request. This was tracked in ISSUE-231.
## Resolved Issues

The following issues were resolved in this release.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-256</td>
<td>Resolved an issue processing collected runpath data with trailing whitespace.</td>
</tr>
</tbody>
</table>

### September 17, 2020

Released September 17, 2020

## Resolved Issues

The following issues were resolved in this release.

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<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-184</td>
<td>Fix Legacy Assets export on FlexDeploy when accessing via certain NAT/DNS configurations.</td>
</tr>
<tr>
<td>ISSUE-180</td>
<td>More accurately account for network storage during aggregation.</td>
</tr>
<tr>
<td>ISSUE-173</td>
<td>Application matching improvements.</td>
</tr>
</tbody>
</table>

### September 10, 2020

Released September 10, 2020

## Resolved Issues

The following issue was resolved in this release.

<table>
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<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-144</td>
<td>Security patch.</td>
</tr>
</tbody>
</table>
September 3, 2020

Released September 3, 2020

Resolved Issues

The following issue was resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-189</td>
<td>Updated RN150 image released.</td>
</tr>
</tbody>
</table>

August 27, 2020

Released August 27, 2020

New Features

New Check in Endpoint for Debian RN150 Appliances

A new check in endpoint for Debian RN150 appliances was added. This issue was tracked in ISSUE-134.

Resolved Issues

The following issue was resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>ISSUE-152</td>
<td>Stop truncating long process names in asset data.</td>
</tr>
</tbody>
</table>

August 13, 2020

Released August 13, 2020

Resolved Issues

The following issues were resolved in this release

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-127</td>
<td>Resolved an issue with Inventory Aggregation errors.</td>
</tr>
<tr>
<td>ISSUE-115</td>
<td>Fixed an issue with discrepancies in the hostnames displayed on different pages.</td>
</tr>
<tr>
<td>ISSUE-117</td>
<td>Disable the Orb for assessments with more than 400 stacks in which it becomes unreadable.</td>
</tr>
</tbody>
</table>
**Version 15.7.1 (August 6, 2020)**

Version 15.7.1, Released August 6, 2020

**Resolved Issues**

The following issues were resolved in this release:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-54</td>
<td>Resolved an issue with phantom device added to stacks during import.</td>
</tr>
<tr>
<td>ISSUE-57</td>
<td>Fixed an issue where stack membership import hung on some FlexDeploys.</td>
</tr>
<tr>
<td>ISSUE-80</td>
<td>Resolved an issue with downloading generated reports on FlexDeploy.</td>
</tr>
<tr>
<td>ISSUE-87</td>
<td>Corrected the Cloud Analysis for On Prem cost displayed in the Executive Summary to always show cost per annum regardless of the timeline set in Total Cost of Ownership.</td>
</tr>
<tr>
<td>ISSUE-88</td>
<td>Updated inventory data retention policy to improve performance in large assessments with frequent rescans.</td>
</tr>
<tr>
<td>ISSUE-97</td>
<td>Resolved an occasional issue where stack names would not display on the Total Cost of Ownership page.</td>
</tr>
</tbody>
</table>

**Version 15.7 (June 24, 2020)**

Version 15.7, Released June 24, 2020

**New Features**

**Can Now Filter with a Backslash Character**

You can now use a backslash character (\) to filter on the Advanced Rule Sets page. This issue was tracked in ISSUE-7583.

**Stack Membership Page Help Tooltips Updated**

On the Stack Membership page, the help tooltips were updated to include the required upload file criteria and process. This issue was tracked in ISSUE-7584.

**Resolved Issues**

The following issues were resolved in this release:

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-7600</td>
<td>Application Description was being modified with stack membership uploads. This is not a required/modifiable field in the import.</td>
</tr>
</tbody>
</table>
Version 15.6 (May 22, 2020)

Version 15.6, Released on May 22, 2020

New Features

Removal of Appques

In this release, Appques was removed from the platform. This issue was tracked in ISSUE-7564.

Resolved Issues

The following issues were resolved in this release.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-7479</td>
<td>Resolved an issue where certain data tables failed to scroll passed 200 records if the browser was zoomed in past 100%.</td>
</tr>
<tr>
<td>ISSUE-7433</td>
<td>Fixed the Geolocation slide in the Executive Summary export.</td>
</tr>
<tr>
<td>ISSUE-7550</td>
<td>Resolved an issue with credential handling/validation when a backslash was in the password.</td>
</tr>
<tr>
<td>ISSUE-7514</td>
<td>Resolved an issue with credential handling/validation when a single quote was in the password.</td>
</tr>
<tr>
<td>ISSUE-7569</td>
<td>Fixed the Server Inventory report that can be generated and downloaded. Two of the contained reports had duplicated data.</td>
</tr>
<tr>
<td>ISSUE-7570</td>
<td>Fixed an issue with the Summary Report download.</td>
</tr>
</tbody>
</table>

Version 15.5 (May 5, 2020)

Version 15.5, Released on May 5, 2020
New Features

Reintroduced CSV Import/Export

In this release, CSV import/export for tags and stack membership was re-introduced, with a revamped UI and support for larger datasets.

Resolved Issues

The following issues were resolved in this release.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-7430</td>
<td>Resolved an issue where full exports on certain pages were missing a single record.</td>
</tr>
<tr>
<td>ISSUE-7454</td>
<td>Added an error message into the platform when rebuilding the data on the Total Cost of Ownership page fails.</td>
</tr>
</tbody>
</table>

Version 15.3 (February 20, 2020)

Version 15.3, Released on February 20, 2020

New Features

Performance and Trending Pages Now Included

In this release, the Performance and Trending pages are now included with Foundation. This issue was tracked in ISSUE-7281.

Windows DNS Cache is Collected During Inventory

In this release, the Windows DNS cache is now collected during inventory. This issue was tracked in ISSUE-7023.

Resolved Issues

The following issues were resolved in this release.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-6930</td>
<td>Added basic CPU parser for the IBM S390 architecture. It will gather basic metrics like number of CPUs (no distinction between cores / physical CPU is possible), model #, and frequency. (Support: 12713)</td>
</tr>
<tr>
<td>ISSUE-7045</td>
<td>Increased the timeout for the ‘sudo true’ command to 60 seconds to avoid timeouts when using a networked authentication backend (e.g. LDAP). (Support: 13129)</td>
</tr>
<tr>
<td>ISSUE-7061</td>
<td>A change was made to the AIX inventory process that allows validation to succeed regardless of which locale the system is configured with (in this case, Korean). (Support: 13099)</td>
</tr>
</tbody>
</table>
Version 14.2 (September 4, 2019)

Version 14.2, Released on September 4, 2019

New Features

Performance and Collection Improvements
In this release, multiple performance and collection improvements on RN150 appliances were made.

Support for dzdo
In this release, support for dzdo on the RN150 appliance was added.

Resolved Issues

- Fixed issue where filtering on the Licensing page would display inaccurate counts for the number of rows returned as well as the number of licenses used.
- Fixed issue where some FlexDeploy appliances were performing poorly when rebuilding the Orb visualization.
- Fixed issue where the PPTX export on the View Individual Application Stack page had connectivity data in incorrect columns.
- Fixed issue where an incorrect error message would show when attempting to load visualizations for individual servers on the Application Stack Summary page.
- Restyled Connection Information button on Geolocations page.

<table>
<thead>
<tr>
<th>Issue</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISSUE-7288</td>
<td>Resolved an error encountered when marrying RN150 to FDP having to do with a lack of carriage returns after headers in the http request that is hard-coded into Java/tomcat. (Support: 14252)</td>
</tr>
<tr>
<td>ISSUE-7335</td>
<td>Resolved an issue on the Detailed Application Dependency Report that could cause mismatched display of information with certain data sets. (Support: 1984302)</td>
</tr>
<tr>
<td>ISSUE-7019</td>
<td>Resolved an issue where incomplete error messaging was presented during a failed SSH Validation.</td>
</tr>
<tr>
<td>ISSUE-7054</td>
<td>Resolved an issue where Database credential removal deletes the credential but does not disassociate the mapping, which blocks new credential mapping.</td>
</tr>
<tr>
<td>ISSUE-7230</td>
<td>Fixed a UI issue with scroll bars on IaaS Cloud Pricing Page.</td>
</tr>
<tr>
<td>ISSUE-7299</td>
<td>Fixed a UI issue which caused a necessary scroll bar to no appear on some pages.</td>
</tr>
<tr>
<td>ISSUE-7315</td>
<td>Fixed a UI issue which cause extraneous whitespace on the Legacy Assets page.</td>
</tr>
</tbody>
</table>
• Fixed issue where SSH credential tests would show a false positive success after the appliance had already been fully initialized.

• Fixed issue where the View Individual Application Stack page Server export had an unnecessary column with poorly-formatted data.

• Fixed issue with language inconsistency in the RN150 Windows DNS Cache Collection description modal.

Version 14.1 (July 23, 2019)

Version 14.1, Released on July 23, 2019

New Features

Improved and Reorganized Asset Errors Page
In this release, some improvements and reorganization of the Asset Errors page were implemented.

Resolved Issues

• Fixed issue where an “Unknown” device would appear in Application Stacks after a Stack Membership import.

• Fixed issue where duplicate entries could be seen in the Summary of Collection table after switching assessments.

• Fixed issue where the time buffer when typing in page numbers on data tables was a bit too short and caused premature reloads.

• Fixed issue where some elements on the Threats page would become misaligned when zooming in/out on the page.

• Fixed issue where (unusable) check boxes were displayed on the Asset Errors page for Read-Only users.

Version 14.0 (June 11, 2019)

Version 14.0, Released on June 11, 2019

New Features

New Optimization Scorecard Page
In this release an Optimization Scorecard page was implemented, which represents a major overhaul of the Interactive Scorecard report.

PowerPoint Export for View Individual Application Stack Page
In this release, a Microsoft PowerPoint (.pptx) export for the View Individual Application Stack page was implemented.
Enhanced Geolocation Feature
The Geolocation feature was overhauled and enhanced.

Additional Reserved Instance Pricing for AWS and Axure US East Regions
In this release, one- and three-year Reserved Instance pricing for AWS and Azure US East regions was added.

Resolved Issues
- Fixed issues with clarity and functionality of custom filters on Assets page.
- Fixed issue where device count would fail to show on hover on the Asset time series graph.
- Fixed issue where it was possible to create an Application Stack without a description via the Stack Management feature.
- Fixed issue where IaaS toggle on the All Applications page would fail to reorganize the Application Stacks table.
- Fixed issue where the Assets scope pie chart would get stuck when window was resized.

Version 13.4 (May 3, 2019)
Version 13.4, Released on May 3, 2019

Resolved Issues
- Fixed some performance issues for proxied FlexDeploy appliances.
- Fixed scaling issues on Assets page Assets Over Time chart
- Fixed issue where default time period for 'Assets Over Time' chart was incorrect.
- Fixed issue where Selected Stacks count on the Dashboard Orb visualization was incorrect after re-ordering selected tag groups.
- Fixed issue with SNMP collection.
- Fixed issue where filtering on Assets page data table would often happen before the user had finished typing.
- Fixed issue where filtering on Application Owner on All Applications page would fail.
- Fixed issue where Asset Errors export would fail after the user had applied certain combinations of filtering and sorting.
- Fixed issue where sorting after applying filters on the Vulnerabilities table on the Threats page would clear the filters.
- Fixed issue where example data for Tag Management page was incorrect / misleading.
- Fixed issue where Device Count field on the Threat Checks table was throwing errors when filters were applied.
Version 13.3 (March 27, 2019)

Version 13.3, Released on March 27, 2019

New Features

Application Stack Edit Modal Updated
There were updates to the Application Stack edit modal on the Assets page.

Resolved Issues

- Fixed issues with CPU processor / core discrepancies across the platform.
- Fixed issue where legacy Dashboard visualization would fail to expand.
- Fixed issue where new assessments would default to an empty (broken) dashboard page, rather than Appliance Status page.
- Fixed issue where Feature Licensing table would only update after a session restart.
- Fixed issues with moving / copying / removing assets to and from Application Stacks on the Assets page.
- Fixed issue where “Last Modified” date on the Migration Plans page would not update after certain actions were taken.
- Fixed issue where Source Port and Dest Port columns were unavailable on the View Individual Application Stack page when clicking on connections.
- Fixed issue where the graph on the Assets page would cut off some count values.

Version 13.2 (March 6, 2019)

Version 13.2, Released on March 6, 2019

New Features

Deployment of Balsam Features
In this release, Balsam features and subsequent bug fixes to FlexDeploy appliances were deployed.

Resolved Issues

- Fixed issue where the Assets table would fail to export if the user had previously filtered on a custom tag column.
- Fixed issue where Advanced Ruleset rules could not be removed.
- Fixed issue where Geolocations preview tab on the dashboard would get stuck in a loading state when there is no Geolocation data to show.
- Fixed issue where sorting ascending / descending on the IP address field on the Assets table would throw an API error.
- Fixed issue where user couldn’t filter for numeric values in the TCO page.
Version 13.1 (February 26, 2019)

Resolved Issues

• Fixed issue where Customer Success contact button (regarding 0 devices licensed) was unresponsive.
• Fixed issues with auto-logout timing.
• Fixed issues with device count discrepancies on the Assets page.
• Fixed issue where “fuzzy search” (approximate string matching) functionality on some sub-tables was a bit too “fuzzy.”
• Fixed issue where selecting a single device for operations on the Assets page would sometimes erroneously select multiple devices.
• Fixed issue where Total Cost of Ownership calculation displayed on the View Individual Application Stack page was wrong if the user had selected a different value than the default for Timeline in Years.
• Fixed issue where the Software Vulnerabilities table on the Threats page would clear its filters after being sorted by date.

Version 13.0 (February 1, 2019)

New Features

Security Module
In this release, the Security Module (including NIST and OVAL integration, Geolocation, and other threat reporting) was implemented.

Dashboard Redesign
This release includes a complete redesign of the Dashboard.

Assets Page Redesign
This release includes a complete redesign of the Assets page (includes ability to track assets over time).

Asset Error Page Enhancements
In this release, the Asset Errors page was implemented to allow for tracking of collection issues and suggested fixes.
Version 12.4 (January 11, 2019)

Resolved Issues

- Some maintenance improvements on RN150s were completed.
- Fixed issue where Subscription Administrators were unable to edit User Permissions for other existing users on the User Access page.
- Fixed issue where Windows devices without correct credentials would sometimes show up as Generic SNMP devices.
- Fixed issue where Dashboard page would sometimes fail to load when browsing to /app/index.php URL rather than just /app/.
- Fixed issue where button to refresh outdated Total Cost of Ownership data would fail to respond.
- Fixed issue where fetching number of licensed devices for collection on Flex Deploy engagements would sometimes fail.
- Fixed issue where button to refresh outdated Total Cost of Ownership data would fail to respond.
- Fixed issue where some orchestration API calls would time out too quickly.
- Fixed issue where Total Cost of Ownership documentation link would redirect to portal.riscnetworks.com regardless of whether or not the user was on a Flex Deploy engagement.
- Fixed issue where loading gif image on Dashboard would stack on top of itself when clicking back and forth between critical and non-critical connections in the App Stack visualization.

Version 12.3 (December 19, 2018)

New Features

Enhanced Collection Feature

In this release, the collection feature was implemented to collect running applications, installed packages, and application descriptions more effectively from Linux servers via SSH collection.

Resolved Issues

- Fixed issue where attempting to bootstrap an RN150 appliance from the Interfaces page rather than the key.php page would result in 403 error.
- Fixed issue where the installation of a custom proxy certificate on a FlexDeploy would cause communication failure with orchestration API service due to failure to reload Tomcat service.
- Fixed issue where Scheduled Discovery calendar would sometimes exhaust the PHP memory limit due to recurring scans being scheduled up to 10 years in the future.
- Fixed issue where Tag Management download for Asset tags would fail on certain assessments with a large number of applied tags.
• Fixed issue where incorrect table could appear on the Dependency Data By Device page under certain conditions.
• Fixed issue where tag values were not displaying correctly on other pages after updating them using Tag Management feature.
• Fixed issue where apostrophe characters in user email addresses would sometimes cause permission failures to occur.
• Fixed inefficiency issue with Build App Stacks process.

**Version 12.2 (December 5, 2018)**

Version 12.2, Released on December 5, 2018

**Resolved Issues**

• Maintenance release to upgrade PHP on FlexDeploy appliances.
• Additional code changes to ensure compatibility.

**Version 12.1 (November 26, 2018)**

Version 12.1, Released on November 26, 2018

**Resolved Issues**

• Fixed issue where the Dependent Stacks visualization on the View Individual Application Stack page failed to indicate copied servers.
• Fixed issue where number of licenses would sometimes display a negative count.
• Fixed issue where copying a device into more than two application stacks would fail.
• Fixed issue where CPU utilization metrics were displaying an average (since system boot) rather than the most current metric.

**Version 12.0 (November 16, 2018)**

Version 12.0, Released on November 16, 2018

**New Features**

**Total Cost of Ownership Report**

In this release, the Total Cost of Ownership report was implemented.

**New Read-Only User Permission**

In this release, User Permissions were added that allow for new Read-Only User type.
User Access Page Supports User Permissions

The User Access page was redesigned to support User Permissions.

Updated Visualizations

This release includes updated visualizations to fully support copying servers into multiple application stacks. Also, a legend was added to indicate visualization icons.

AppCues Widget and Platform Walkthroughs

The AppCues widget and platform walkthroughs for SaaS assessments were implemented.

Collection Improvements on RN150 Virtual Appliance

Several collection improvements on the RN150 were made to allow for better logging, performance collection, and for generation of device fingerprints for future inventory re-architecture.

Resolved Issues

- Fixed issue where application stack records in the dashboard data table were duplicated after loading past 100 records.
- Fixed issue where RAM, CPU and Storage usage data was mislabeled on the Application Stacks Summary page.
- Fixed issue where full Assets export was unavailable for 'RDS' type subscriptions.
- Fixed issue where integer values were not enforced in the "Port" field for database credentials on the RN150.
- Fixed issue where confirming / saving an application stack multiple times would cause the confirmed / saved icons to get out of sync in the visualization.
- Fixed issue where the User Access Log page was showing incorrect timestamps.
- Fixed issue where the application instance name under Device Details was sometimes incorrectly truncated.
- Fixed issue where the Netstat column on Dependency Data by Device table was not searchable by string.
- Fixed issue where filtering for devices with multiple IP addresses would fail to update the data table on the Visualize Individual Workloads page.

Version 11.7 (October 16, 2018)

Version 11.7, Released on October 16, 2018

Resolved Issues

- Fixed issue where Migration Plan Dashboard would fail to load on some assessments.
- Fixed issue where devices failed to be removed from unsaved / unconfirmed app stacks when moved using the Stack Membership CSV import.
- Fixed issue where Device Type filters on the View Individual Application Stack page were not functioning.
- Fixed issue where filtering on a '1' or '0' on the Licensing page would fail to return licensed and non-licensed devices, respectively.
- Fixed issue where Migration Plans based on Dependency Data would get hung up on creation and render the page unusable until a page refresh.
- Fixed issue where the Detailed Application Dependency Data report would fail to load under certain conditions.

**Version 11.6 (October 8, 2018)**

Version 11.6, Released on October 8, 2018

**Resolved Issues**

- Fixed issue where attempting to load exact sets of 100 records in data tables would result in failure / an infinite loop.
- Fixed issue where significant portions of records in Flow / Dependency Data table would fail to return.
- Fixed issue where CloudEndure export file was malformed.
- Fixed issue where data table filters across several columns would perform an OR operation rather than an AND operation, resulting in a clearing of the initial filters.
- Fixed issue where stack-level performance metrics would fail to load on the Performance and Trending > Application Stack page.

**Version 11.5 (September 18, 2018)**

Version 11.5, Released on September 18, 2018

**Resolved Issues**

- Fixed issue where complex rulesets would only display the first condition of the ruleset.
- Fixed multiple issues with locations page, including an issue where the confirmation modal would display an old location name if the location was renamed since the page was refreshed.
- Fixed an issue where filters on certain additional reports would persist across all assessments a user is entitled to.
- Fixed an issue where devices would fail to be removed from app stacks when using the remove function on the assets page.
- Fixed an issue where filtering by "Server Count" on the All Applications page would cause "0 records" to be returned.
Version 11.4 (September 7, 2018)

Resolved Issues

- Fixed issue where scan time on the Private Cloud Resource Requirements page was inaccurate.
- Fixed issue where adding a huge number of asset tags to a single tag key would cause records to fail to return on the assets page.
- Fixed issue where device / stack IDs in tag / stack exports for the purpose of tag and stack management were being converted to scientific notation and subsequently rounded up by Excel.
- Fixed issue where modifying locations would block new location data from populating.
- Fixed issue where some critical dependencies would fail to return in the Economics Report.

Version 11.3 (August 31, 2018)

Resolved Issues

- Fixed issue where null values in the assets datatable would sometimes cause data to appear in the wrong column.
- Fixed issue where separator characters in imported tags would cause the creation of multiple tags rather than a single tag.
- Fixed issue where the application stacks export had a tag string containing all stack tags appended to the end of the row.
- Fixed issue where certain special characters would cause the dashboard datatable to fail to return.

Version 11.2 (August 14, 2018)

Resolved Issues

- Fixed issue where FDP assessments would fail to submit Request for Help tickets.
- Fixed issue where Application Stack names were sometimes getting erroneously applied to one arbitrary device on the Private Cloud Resource Requirements page.
- Fixed issue where the Assets page would sometimes fail to scroll past 300 records on an asset category.
Version 11.1 (August 10, 2018)

Version 11.1, Released on August 10, 2018

New Features

Bulk Modification of App Stack Membership
In this release, the ability to modify App Stack membership in bulk was added.

Enabled AWS EC2 Collection Method by Default
The AWS EC2 collection method was enabled by default on the RN150 appliance.

Resolved Issues
- Fixed issues with SSH collection validation on RN150 appliances.
- Fixed issue where infrastructure devices would sometimes be inventoried as Linux/Unix devices.
- Added toggle for sudo enforcement on AIX systems for the purpose of certain collection commands.

Version 11.0 (August 1, 2018)

Version 11.0, Released on August 1, 2018

New Features

CSRF Protection
CSRF protection was added to RN150 appliances.

New Alarm Mechanism to Log Errors
In this release, an additional alarm mechanism to log errors on RN150 appliances was added.

Automation Selection of Last Assessment User Was Viewing
The portal now automatically selects the last assessment the user was viewing on login. If the user is only associated with one assessment, that assessment is automatically selected on login.

Resolved Issues
- Fixed issues where proxies with SSL decryption would cause FlexDeploy services to fail to connect.
- Added support for failover attempts for Scheduled Discovery scans.
- Fixed issue where the "Server" view on the Application Stack Summary page would sometimes allow a user to navigate to an empty "View Individual Application Stack" page.
Version 10.4 (July 25, 2018)

Resolved Issues

- Fixed additional issues with full asset export.
- Fixed issue where some asset categories would have mismatched device counts on the assets page.
- Fixed issue where some last scanned dates were not being returned on the assets page.

Version 10.3 (July 13, 2018)

Resolved Issues

- Fixed multiple issues with full asset export.
- Fixed issue with erroneous last scanned dates for Windows inaccessible device types.
- Fixed issue where app stack details would sometimes fail to finish loading on View Individual Application Stack page.

Version 10.2 (July 6, 2018)

Resolved Issues

- Fixed issue where refreshing the page rapidly on the RN150 appliance would cause continuous network resets (protects against potential DoS).
- Fixed issue where erroneous application instance tags would sometimes be applied after opting out of process path collection on RN150 appliance.

Version 10.1 (July 3, 2018)

New Features

**Bulk Tag Management Capability**

Bulk tag management capability was added on the [Add Intelligence > Search Applications and Processes](#) page.
App Stack Change Log Report
The App Stack Change Log report was added.

Resolved Issues
- Fixed multiple issues with the Assets page, including portions of the report export that would fail to return

Version 10.0 (June 20, 2018)
Version 10.0, Released on June 20, 2018

New Features

Ability to Opt Out of Process Path Collection
In this release, new toggle was added to opt out of process path collection on RN150.

Device Tags Added to Assets Page and Full Asset Export
Device tags were added to the Assets page and to the full Asset export.

Enabled Database Collection Module By Default
The database collection module was enabled by default for all assessments.

Resolved Issues
- Fixed issue where advanced debugging would sometimes fail to turn on FlexDeploy appliances
- Fixed issue where column visibility toggle on View Individual Application Stacks page would sometimes be cut off at the bottom of the screen

Version 9.3 (May 29, 2018)
Version 9.3, Released on May 29, 2018

Resolved Issues
- Fixed issue where decommissioned Windows devices could block the addition of any new devices with the same IP address
- Fixed an issue where CURL requests to validate URIs on FlexDeploy appliances would fail when the FlexDeploy had a proxy configuration and was browsed to by DNS name
- Added logging to a critical collection script to allow for easier debugging
- Integrated webpack into front-end build system and broke up large singular Javascript file into components and utility functions for easier development and debugging
- Added resize option for left panel of VIAS page
Version 9.2 (May 23, 2018)

Version 9.2, Released on May 23, 2018

Resolved Issues

- Fixed issue where FlexDeploy appliances would fail to report their version numbers.
- Implemented performance improvements on Private Cloud Resource Requirements page.
- Fixed bug with visualization lock functionality on the Topology report.
- Updated Sentry checks on FlexDeploys.

Version 9.1 (May 18, 2018)

Version 9.1, Released on May 18, 2018

Resolved Issues

- Fixed typo on Flow/Dependency Data page.
- Fixed issue on Private Cloud Resource Requirements page where '-1' would be displayed in table cells where resource metrics weren't collected for a device during a certain time period.
- Fixed issue on View Individual App Stacks page where the Tag Distribution heatmap did not display tag values without mousing over the heatmap itself.

Version 9.0 (May 16, 2018)

Version 9.0, Released on May 16, 2018

New Features

Appliance TLS Certificate Self-Service
Appliance TLS Certificate Self-Service was added.

Discovery Tags for ServiceNow
Discovery tags for ServiceNow were added.

Ability to Opt Out of Process Argument Collection in RN150
This release includes an option to opt out of process argument collection in RN150.

Resolved Issues

- Fixed issue with discovery where certain subnets would be excluded from further scans
- Fixed issue where "Full Export" on the assets page would fail on FlexDeploy assessments
Version 8.1 (May 10, 2018)

Version 8.1, Released on May 10, 2018

Resolved Issues

- Update RN150 so that SSH encoding fixes can be applied via feature flag.

Version 8.0 (May 8, 2018)

Version 8.0, Released on May 8, 2018

Resolved Issues

- For asset reports, auto-sized the columns to make the data more readable (Consume Intelligence > Assets > Export Full Report).
- Fixed Last Login Attempt date on Consume Intelligence > Assets > Windows Devices > Inacessible.
- Fixed issue where SNMP collection would fail for all SNMP devices if a single SNMP device failed to respond.
- Fixed issue with VMWare collection, in which inventory would fail if the customer’s VMWare was incorrectly configured (missing config.host MOB reference in the HostSystem entity view).

Version 7.0 (April 19, 2018)

Version 7.0, Released on April 19, 2018

New Features

Flexible Scheduling for Discovery and Inventory

The ability to schedule discovery and inventory on a one-time basis or on a recurring schedule on the RN-150 was added.

Velostrata Migration Export

Velostrata Migration Export (Consume Intelligence > View Individual App Stack > Action > Migrate Application Stack > Re-Host with Velostrata) was added.

Discover and Collect Data from AWS EC2 Instances

(Beta) The ability to discover and collect data from AWS EC2 instances was added. (You must request access for this feature at this time.)

Phone Number Field Added to Support Form

A phone number field was added to the form that is used when requesting help from Support.
Resolved Issues

- Fixed bug where tags were being displayed in the wrong column (Consume Intelligence > Application Stack Summary)
- Fixed bug on Consume Intelligence > Assets when viewing Scoped assets and only a single asset is returned
- Fixed bug where connection details were not being refreshed when selecting a new app stack (Consume Intelligence > View Individual App Stack)
- Fixed bug for making sure connection details table is viewable when screen resolution is too low (Consume Intelligence > View Individual App Stack)
- Fixed bug where getting device details by right-clicking on a link between two devices in the stack visualization would fail (Consume Intelligence > View Individual App Stack)
- Fixed problem where device is discovered but not inventoried due to strange circumstance involving bonded interfaces
- Fixed issue with metrics due to identity issues with cloned VMs deployed under different VCenters
- Fixed a bug where collection validation would fail due to an erroneous termination signal

Version 6.0 (March 30, 2018)

Version 6.0, Released on March 30, 2018

New Features

Redesigned View Individual App Stack Page

The Add Intelligence > View Individual App Stack page was redesigned.

Stack Performance Section

A new Stack Performance section was added for a quick visual of how the stack is performing.

Option on Right-Click Menu to Save Multiple Stacks

A new menu option to save multiple stacks was added to the right-click context menu.

Resolved Issues

- Fixed issue with HTML tags appearing in App Stack Summary exports (Consume Intelligence > Application Stack Summary)
- Fixed issue on Flow Dependency page where data was being incorrectly converted to a different unit twice (Collect Data > Flow / Dependency Data)
- Fixed bug with topology export (Add Intelligence > Visualize Topology)
- Fixed an issue with devices disappearing during revision-mode re-scan if ssh collection fails
- Fixed a bug introduced in 5.0 that affected device collection for certain devices
• Fixed bug with updating locations
• Added proper notification for when asset aggregation completes and dashboard is ready

Version 5.0 (February 22, 2018)

Version 5.0, Released on February 22, 2018

New Features

Multi-Factor Authentication
Multi-factor Authentication for secure logins was added (optional until end of March 2018).

Subscription Administration Panel
A new Subscription Administration panel was added for managing subscriptions (under the “hamburger menu”).

Ability to Inventory Netscaler Load-Balancers
Support for inventorying Netscaler load-balancers was added.

Export to CloudEndure
Support for exporting to CloudEndure was added (View Individual Application Stack > Action > Migrate Application Stack > Re-host with CloudEndure).

Documentation Links for Common Queries
The Request Help panel now provides documentation links for common queries (under “hamburger menu”).

App-Stack Tags Added to All Applications Table
Consumable/editable app-stack tags have been added to the All Applications table.

Support for DNS Collection and Tagaging
Support for DNS collection and tagging was added.

Support for vSphere 6.5 for Flow Collection
Support for vSphere 6.5 for Flow Collection (RN50) was added.

Resolved Issues
• Allow navigation away from dashboard before visualization finishes loading
• Location updates were not getting updated in the dashboard and topology visualization
• Improved email notifications around invalid credentials and other alarms
• Fixed issues with data-collection validation for SSH and Windows
• Fixed issues with data collection due to non-standard Linux configuration
• Fixed issues with Cisco CLI credential

Version 4.0 (January 16, 2018)

Version 4.0, Released on January 16, 2018

New Features

Windows Server/Workstation Data-Collection Validation
Support for Windows server/workstation data-collection validation was added.

Inventorying F5 Load-Balancers
Support for inventorying F5 load-balancers was added.

New Save Option for Application Stacks
For application stacks, a Save option (like Confirm) was added to prevent app-stacks from being modified when rebuilding app stacks.

Link Labels in Topology Visualization
Link labels in Topology visualization (Add Intelligence > Visualize Topology) were added.

Resolved Issues
• Fixed missing nodes in Topology visualization (Add Intelligence > Visualize Topology)
• Improvements to the Performance & Trending “magic quadrant” (Consume Intelligence > IT Environment)

Version 3.0 (December 21, 2017)

Version 3.0, Released on December 21, 2017

New Features

Proxy Server Support on FlexDeploy
Proxy Server Support on FlexDeploy was added.

Enhanced Historical Analysis
On the Performance and Trending Module, Enhanced Historical Analysis (Consume Intelligence > Application Stack) was added.

Process Details on Individual Server Visualization
Process Details on Individual Server Visualization were added (Add Intelligence > Visualize Individual Workloads).
Version 2.0 (November 21, 2017)

Version 2.0, Released on November 21, 2017

**New Features**

**Product Documentation Link**
A link to product documentation was added as a Documentation menu item in the app.

**Linux/UNIX Server Data-Collection Validation**
Support for Linux/UNIX server data-collection validation was added.

Version 1.0 (October 22, 2017)

Version 1.0, Released on October 22, 2017

**New Features**

**Export Assets Page**
The ability to export Assets page was added ([Consume Intelligence > Assets]).

**Application Stack Tag Management & Tree Map**
The Application Stack Tag Management & Tree Map was added ([Add Intelligence > View Individual Application Stack Page]).
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