Release Notes
Version: 14.8.x
June 2025

Contents

New and Updated Features

This topic summarizes both new and updated Densify features introduced in version 14.8.x.

> *Note:* *After any upgrade you must clear your browser cache before logging into the Densify Console. This is required regardless of the type or version of browser you are using.*

The following sections provide details of new features and updates introduced in each release.

- 14.x–Features in the 14.x series of SaaS releases;
- Densify Connector–Updates to the Densify Connector.

Densify 14.8.x Patches

14.8.7 - June 11, 2024

The Jasper Service License has been updated. The new license required a rebuild of the web service container with the new license file.

This patch does not require a schema update, package update or JRSImport.

14.8.6 - February 12, 2025

Densify's Azure AD solution has been updated to use the Azure API call `https://graph.microsoft.com/.default`. Previously, the API, `https://graph.windows.net/User.Read` was used and this API has now been deprecated.

The deprecated API should be removed from your configuration and the Azure Active Directory Graph User.Read permission can be revoked. Refer to https://techcommunity.microsoft.com/blog/microsoft-entra-blog/june-2024-update-on-azure-ad-graph-api-retirement/4094534

The API permissions for the Densify web application need to be updated to add "GroupMember.Read.All".

See *Configuring External User Authentication* (Help Topic ID 111370) for details of configuring Open ID and *Example Configuration for Azure Active Directory* (Help ID 111420) for specific details of Azure EntraID configuration.

This patch does not require a schema update, package update or JRSImport.

August 14, 2024

The online help for Virtualization Optimizer has been updated to remove all cloud and container references. Contact Support@Densify.com for details of managing your cloud and container environments in Densify.

14.8.3 - January 25, 2024

When using the fill-and-spill features the logic has been corrected select the datastore with the least available capacity when "fill" is selected.

This patch does not require a schema update, package update or JRSImport.

See Table: 14.8.3 - January 25, 2024 for the list of resolved defects.

14.8.2 - November 3, 2023

When editing attributes, you now see a warning message if more than 1000 systems will be affected by the change. An override option is provided for cases where more than 1000 systems must be updated.

This patch does not require a schema update, package update or JRSImport.

See Table: Densify 14.8.2 - November 3, 2023 for the list of resolved defects.

14.8.1 - October 18, 2023

The option to select hourly information has been added back to the Workload Extract report. This report is not intended for large data sets. The option to review all available data has been removed. This report is now configured through an external file. Contact Support@Densify.com to change any of the following default settings:

- The default number of systems is 1000.
- The default number of days is 30.
- The default number of workload types is 4.

See *Configuring the Hourly Extract Report* in the topic *DCE Workload Data* (Help Topic 171410).

This patch does not require a schema update, package update or JRSImport.

See Table: 14.8.1 - October 18, 2023 for the list of resolved defects.

Densify 14.8.0 - August 23, 2023

Rebranding

In this release, this version of Densify is officially branded as Virtualization Optimizer. Logos throughout the product and on the Densify website have been updated.

Additionally, the product version has been added to the About dialog box. See *Navigating Densify* (Help Topic ID 380110) for details.

This version is intended for optimizing your private cloud. Contact your Densifyaccoutn manager if you want to optimize your cloud or container environments.

Hourly Information has been Deprecated from the Workload Extract Report

The option to select hourly information has been deprecated from the Workload Extract report. This report was not intended for large data sets.

Users can still obtain this report using the **Daily Information** option.

Postman Collection Updated

The Supply and Demand Postman collection has been updated in this release. The updated supply and demand API examples are provided as a separate collection. See *Postman Collection* (Help ID 340670) in the API documentation.

Resolved Issues

See Table: 14.8.0 - August 23, 2023 for the list of resolved defects.

Densify 14.7.0 - December 14, 2022

Routing and Reservation Updates

Two significant updates have been made to the route and reserve features in this release:

- During routing of incoming workloads, any clusters that are undergoing sensor data recalculation (i.e. sensor capacity data is not available) are now excluded from consideration as a hosting option. This ensures that valid sensor capacity data is used when making routing decisions. See *Working with Sensors* (Help ID 230500).

- You now have the option to select a sensor "fill and spill" placement strategy for routed workloads. In addition to the existing balancing strategy that distributes incoming workloads across all suitable datastores, you now have the option to fill a datastore and then move to the next one. You can specify a sensor placement strategy when submitting a routing request (via the API) or you can define the strategy globally using a configuration setting. See *Working with Sensors* (Help ID 230500).

  Also see *Routing Requests* (Help Topic ID 340130) in the Densify API documentation.

Resolved Issues

See Table: 14.7.0 - December 14, 2022 for the list of resolved defects.

Densify 14.6.0 - October 5, 2022

Security Updates

Further to the updates started in the last release the following additional security updates have been completed:

- Strict Transport Security Has Been Implemented–An HTTP Strict Transport Security (HSTS) policy has been implemented. As part of this policy, users are no longer redirected from HTTP to HTTPS. You must use the correct HTTPS URL to access your Densify instance.

Resolved Issues

See Table: 14.6.0 - October 5, 2022 for the list of resolved defects.

Densify 14.5.0 - August 17, 2022

Security Updates

This release includes a number of security updates.

- User Access upon Account Deactivation—When user accounts are deactivated or deleted, any existing sessions for that user are terminated on the server-side to prevent unauthorized use of the application. The same applies for situations where a user loses higher access privileges.

- User Account Notifications—The existing feature has been enhanced to send a notification when a user changes their email address or password. In the event of an email address change, a confirmation message is sent to the original email address.

- Browser Caching—Sensitive content is no longer cached by setting the "no-store" directive in the Cache-Control response in the HTTP headers. These changes to the Cache-Control response in the HTTP headers mean that you will likely have to clear your browser cache more frequently than before. This change will make the UI more responsive.

Resolved Issues

See Table: 14.5.0 - August 17, 2022 for the list of resolved defects.

Densify 14.4.0 - July 27, 2022

Security Update

Vulnerability

The following vulnerabilities that may impact Densify have been identified:

- CVE-2022-22965—Spring Framework has released versions 5.3.18 and 5.2.20 to address this RCE vulnerability known as "Spring4Shell".

A remote attacker could exploit this vulnerability to take control of an affected system.

SaaS Instances

Densify uses Cloudflare Web Application Firewall (WAF), which was patched on March 31, 2022, to mitigate this risk. Please review this Cloudflare link for details.

Impacted Densify Applications

Densify uses JasperReports Server Professional and the JasperReports Library, which in turn utilize the Spring Framework.

Densify has not identified any risk to customer data, but has completed the following steps according to the CVE notification:

- JasperReports Library 6.2 (Spring-beans 4.1) is used by both the Analysis Console and Densify Console and has been updated to JasperReports Library 6.19.1 in this release.

See Third Party Software for the changes to list of third-party software.

User Interface Performance Enhancements

A number of updates have been completed in this release that improve UI performance. The changes, started in this release will be completed in the next release. Changes consist mainly of improved database queries and table optimization.

Resolved Issues

See Table: 14.4.0 - July 27, 2022 for the list of resolved defects.

Densify 14.3.0 - June 1, 2022

Security Updates

Spring Shell Vulnerability

Vulnerability

The following vulnerabilities that may impact Densify have been identified:

- CVE-2022-22963—Spring by VMWare has released Spring Cloud Function versions 3.1.7 and 3.2.3 to address this remote code execution (RCE) vulnerability;

- CVE-2022-22965—Spring Framework has also released versions 5.3.18 and 5.2.20 to address this RCE vulnerability known as "Spring4Shell".

A remote attacker could exploit these vulnerabilities to take control of an affected system.

SaaS Instances

Densify uses Cloudflare Web Application Firewall (WAF), which was patched on March 31, 2022, to mitigate this risk. Please review this Cloudflare link for details.

Impacted Densify Applications

Densify uses JasperReports Server Professional and the JasperReports Library, which in turn utilize the Spring Framework.

Densify has not identified any risk to customer data, but has completed the following steps according to the CVE notifications:

- Upgraded to Apache Tomcat® v9.62 to address CVE-2022-22965. See the following link for details: https://spring.io/blog/2022/03/31/spring-framework-rce-early-announcement#vulnerability

- JasperReports Server Professional has indicated it is not affected by CVE-2022-22965 as outlined in the following: https://www.tibco.com/support/notices/spring-framework-vulnerability-update.

However, in this release Densify has upgraded to JasperReports Server Professional 8.0.1 with Spring-beans beans 5.2.20.

- JasperReports Library 6.2 (Spring-beans 4.1) is used by both the Analysis Console and Densify Console and these modules are affected, but in the short term the risk is mitigated by the Cloudflare's WAF updates rules, as indicated above.

  The required fix, of updating to JasperReports Library 6.19.1 will be provided with Densify 14.4.

See Third Party Software for the changes to third-party software.

Authorize API Update

When accessing the Densify user interface a malicious actor cannot perform a brute force attack because the user account is locked after three failed login attempts for a predefined timeout period.

Since users can also authenticate through the 'authorize' API call using the same credentials, the safeguards in place that reduce the risk of a successful brute-force attack have been updated. The delay between failed attempts now doubles and if an attempt is made during the lockout period, the delay is doubled, again.

See *Authorize* (Help Topic ID 340440)

Resolved Issues

See Table: 14.3.0 - June 1, 2022 for the list of resolved defects.

Densify 14.2.0 - February 23, 2022

Security Updates

The following security update has been made in this release:

- Both Densify v14.2 and the Densify Connector have been updated with the Apache Log4j 2.17.1 jar files to address a security vulnerability related to Apache Log4j (CVE-2021-45046, CVE-2021-45105 and CVE-2021-44228).

  You must download and install the new version of the connector. See *Data Collection for VMware Using the Connector* (Help Topic ID 380020) for details on installing and configuring the Densify Connector.

  Your Densify SaaS instance has been patched automatically.

Browser Support for the Control Console and Analysis Console

You can now access the Control Console and the Analysis Console using Microsoft Edge configured for Internet Explorer mode. Internet Explorer will be retired in June 2022, so using Edge's IE mode allows you to continue using these consoles.

In general you can access most of Densify's features through the Densify Console and the Cloud Cost Intelligence module which both run in a number of modern browsers.

See *Browser Requirements* (Help ID 380720) for supported browser versions.

Performance Improvements

Streamlined VMware Data Collection

The VMware audit has been updated to discontinue collection of data that is not used by any analyses. This update will reduce data load times and improve data collection performance.

- Workload metrics are not impacted as only required data is mapped to these metrics;
- Objects have been removed from modules and in some cases whole modules have been removed.
- Data collection modules from both vCenter Server and vROps has been updated.

You must download and install the latest version of the connector, v2.2.4.4. See *Data Collection for VMware Using the Connector* (Help Topic ID 380020) for details on installing and configuring the Densify Connector.

See *Densify Connector Compatibility* (Help Topic 380510) for version details.

Changes to Physical Tree View Loading in DSE/DCE

These following changes will result in significant performance improvements in most environments.:

- The Physical Tree locking mechanism has been re-architected to reduce database locking during loading of audit data.

  The delete domain functionality, currently available through the right-click context menu has been ported to a new CLI tool. Contact Support@Densify.com

- The queue for loading audit data, now prioritizes loading by the size of the audit repository. When multiple repositories are queued for loading, the larger repositories will be prioritized and be moved to the front of the queue as opposed to waiting until all queued repositories are processed.

Resolved Issues

See for the list of resolved defects.

Densify 14.1.x Patches

Densify 14.1.2 - January 5, 2022

The following updates have been made in this release:

- Apache Log4j Security UpdateDensify and the JasperReports Server have been updated with the Apache Log4j 2.17.1 jar files to address security vulnerability CVE-2021-45046 and CVE-2021-45105, after the issue was initially reported in CVE-2021-44228.

  Your Densify SaaS instance will be patched automatically.

See Resolved and Known Issues for the list of resolved defects.

Densify 14.1.1 - December 16, 2021

The following updates have been made to address the security vulnerability CVE-2021-44228:

- Both Densify and the Densify Connector have been updated with the Apache Log4j 2.15.0 jar files to address this issue.
- The JasperReports Server was also updated with the Apache Log4j 2.15.0 jar files. The JasperReports Server is used to deliver Densify's BI features.

You must download and install the new version of the connector. See *Data Collection for VMware Using the Connector* (Help Topic ID 380020) for details on installing and configuring the Densify Connector.

Your Densify SaaS instance will be patched automatically.

See Resolved and Known Issues for the list of resolved defects.

Densify 14.1.0 - December 8, 2021

Densify Training Platform

The Densify training modules have been migrated to the Densify website for ease of access. Users no longer need to create an account and login to access the training modules.

All existing modules are available from the Training Library:
https://www.densify.com/training/Content/Training_Library.htm

You can also view modules sorted by use case/role, from the main training page: https://www.densify.com/training/Content/Welcome_Training.htm

Resolved Issues

See Table: 14.1.0 - December 8, 2021 for the list of resolved defects.

Densify 14.0.0 - October 20, 2021

Supported Data Collection Platforms

The following change has been made to data collection in this release:

- In the Densify Connector v2.2.4.1 has been certified with:

  - vROps version 8.4;

  If you are using a previous version of the Densify Connector, Densify recommends that you upgrade your connector to the current version.

  See *Connector Prerequisites* (Help Topic ID 380010) for the full list of supported VMware versions.

Resolved Issues

See Table: 14.0.0 - October 20, 2021 for the list of resolved defects.

Densify Connector

2.2.4.9 - December 21, 2022

The Densify Connector has been updated to add additional cipher suites to better support TLS 1.2. *Supported TLS Versions* (Help ID 380830) for the complete list of supported cipher suites.

You can download and install the latest version of the connector if you are using action automation and for standard VMware data collection. See *Data Collection for VMware Using the Connector* (Help Topic ID 380020) for details on installing and configuring the Densify Connector. A new version of the JRE will be deployed (jdk11.0.11_9).

If v2.2.4.8 is installed and running as expected and you are using one of the currently supported cipher suites, then you do not need to upgrade, immediately.

This version of the connector has been certified with PowerCLI 12.5.0 and 12.7.0. See *Densify Connector Compatibility* (Help Topic 380510) for version details.

See Table: 2.2.4.9 - December 21, 2022 for the list of resolved defects.

2.2.4.8 - September 27, 2022

The Densify Connector has been updated to address an issue with action automation.

You can download and install the latest version of the connector if you are using action automation and for standard VMware data collection. See *Data Collection for VMware Using the Connector* (Help Topic ID 380020) for details on installing and configuring the Densify Connector.

If v2.2.4.7 is installed and running as expected, and you are not using action automation, then you do not need to upgrade, immediately.

This version of the connector has been certified with PowerCLI 12.5.0 and 12.7.0. See *Densify Connector Compatibility* (Help Topic 380510) for version details.

See Table: 2.2.4.8 - September 27, 2022 for the list of resolved defects.

2.2.4.7 - August 30, 2022

The Densify Connector has been updated to address a security issue related to CVE-2022-22950: Spring Expression DoS Vulnerability.

This version is not supported for Action Automation. You must use v2.2.4.8 if you are using action automation. See *Densify Connector Compatibility* (Help Topic 380510) for version details.

> *Note:* *All versions of the connector prior to 2.2.4.7, are no longer supported or certified as they do not contain both the Log4J and Spring security updates. Densify recommends upgrading your connector to the latest version.*

See Table: 2.2.4.7 - August 30, 2022 for the list of resolved defects.

2.2.4.6 - June 1, 2022

The Densify Connector has been updated to address an issue related to "hot adding" memory.

See Table: 2.2.4.6 - June 1, 2022 for the list of resolved defects.

2.2.4.5 - March 11, 2022

The Densify Connector has been updated to address issues related to token-based authentication and failure to retry status monitoring connections.

See Table: 2.2.4.5 - March 11, 2022 for the list of resolved defects.

2.2.4.4 - February 4, 2022

The Densify Connector has been updated to update the list of data collection modules, previously removed in v2.2.4.3.

See Table: 2.2.4.4 - February 4, 2022 for the list of resolved defects.

2.2.4.3 - January 7, 2022

The Densify Connector has been updated to address the following:

- The collection of data, not used by any analyses, has been discontinued. This update will reduce data collection and load times and improve overall data collection performance.
- The security vulnerability CVE-2021-45046 and CVE-2021-45105, after the Apache Log4j issue was initially reported in CVE-2021-44228. The Densify Connector has been updated with the Apache Log4j 2.17.1 jar files.

See Table: 2.2.4.3 - January 7, 2022 for the list of resolved defects.

2.2.4.2 and 2.2.4.1 - January 4, 2022

The Densify Connector has been updated to address an Apache Log4j security vulnerability.

See Table: 2.2.4.1 and 2.2.4.2 - January 4, 2022 for the list of resolved defects.

2.2.4.2 - December 16, 2021

The following updates have been made to address the security vulnerability CVE-2021-44228:

- Both Densify and the Densify Connector have been updated with the Apache Log4j 2.15.0 jar files to address this issue.
- The JasperReports Server was also updated with the Apache Log4j 2.15.0 jar files. The JasperReports Server is used to deliver Densify's BI features.

See Table: 2.2.4.2 - December 16, 2021 for the list of resolved defects.

Resolved and Known Issues

The following tables provide a list of known issues as well as customer-reported issues, listed by release. All tables are sorted by Densify's Internal Reference number.

- Known Issues—The list of known issues with a work-around, if available.
- Resolved Issues - Densify—The list of customer-reported issues resolved in the specified release.
- Resolved Issues - Densify Connector—The list of customer-reported issues resolved in the specified release of the Densify Connector.

Known Issues

Table: Known Issues in the Current Release

Internal Reference	Team Support Reference	Description
CRB-47314		The workload charts in the Analysis Console look different from the charts displayed in the Densify Console
CRB-47339		The Workload Viewer in Analysis Console displays the original bar charts and original functionality. The Densify Console displays the candlestick workload charts introduced in 12.1.2.
CRB-47419		In large environments, using an API query that returns a very large number of objects (>5000) may result in degraded performance or web server errors. Work-around: Use the `page` and `page_size` parameters to manage the number of objects returned.
CRB-48356		An issue has been encountered related to the date in the calendar component

Internal Reference	Team Support Reference	Description
		display layer for customers in EMEA (where time zones are GMT+). It occurs across all platforms: Cloud, Containers and VMware.
		The analysis is accessing the data up to and including yesterday. The date display issue is very confusing as Densify appears to have lost a day's worth of data. For example, environments are refreshed today (May 15) with the current date set and you would expect to see the end of the interval set to May 14, but for GMT+1 time zones, May 13 is displayed.
		The same problem also likely exists in the Workload Viewer for date settings in GMT- time zones.
CRB-50797	56583	When performing action automation, you may encounter the following, intermittent error: " java.io.FileNotFoundException ". Data collection may fail to retry or fail to load.
		Work-around: Change the vCenter names in the connector to all lowercase.
CRB-51535	63060	When using the standard API, Densify does not return an effortEstimate for systems that are 'Not Analyzed'; however, when using the Subscription API Densifyreturns an effortEstimate of Impossible for systems that are are 'Not Analyzed'.
		Work-around: When enabling effortEstimate for the Subscription API Results, you need to add logic to trap and handle the effortEstimate for systems that are 'Not Analyzed'.
CRB-51803	65879	When creating new datastore tiers, errors in the UI are caused by a tier with double spaces in its name. A small typo, such as double spaces causes the creation of storage tiers without a priority which in turn breaks the Storage Tiers user interface and affects routing by causing routing to fail across the environment.
		Work-around: When creating storage tiers, you must validate that the name does not contain double spaces. Leading and trailing spaces are not an issue as they are handled correctly.
CRB-52408		When using the Report Designer role and creating custom reports you cannot logout from the Jasper Server by clicking the Logout button.
		Work-around: You must click the Logout button 2 times (not double-click). Alternatively you can just close the browser window.

Resolved Issues - Densify

Issues resolved in each release are listed below:

Table: 14.8.6 - February 12, 2025

No customer-reported issues were resolved in this release.

Table: 14.8.3 - January 25, 2024

Internal Reference	Team Support Reference	Description
CRB-54510	90431	Resolved an issue related to editing a large number of attributes.

Table: Densify 14.8.2 - November 3, 2023

Internal Reference	Team Support Reference	Description
CRB-51225	60616	Resolved an issue related to editting a large number of attributes.

Table: 14.8.1 - October 18, 2023

Internal Reference	Team Support Reference	Description
CRB-53883		Enabled the Hourly Workload option for the Workload Extract Report. The feature was previously deprecated.

Table: 14.8.0 - August 23, 2023

Internal Reference	Team Support Reference	Description
CRB-53389		Resolved an issue with the Impact Analysis and Recommendation Report not being displayed properly when generated via an API request.

Table: 14.7.0 - December 14, 2022

Internal Reference	Team Support Reference	Description
CRB-52705	69868	Resolved an issue related to performing T2C analyses.
CRB-52710	71344	Resolved an issue related to deletion of control environments with no clusters.
CRB-52734	73084	Resolved an issue related to performance of loading and working with the Analysis Rulesets page.

Table: 14.6.0 - October 5, 2022

Internal Reference	Team Support Reference	Description
CRB-51904		Resolved an issue related to inconsistencies in access to a locked user account.

Internal Reference	Team Support Reference	Description
CRB-52603	71996	Resolved an issue related to user verification via reCAPTCHA.
CRB-52611	72183	Resolved an issue that prevented users from logging in via Open ID.
CRB-52612	71995	Resolved an issue that caused RDB loading to fail when an attribute value is an empty string.
CRB-52629	72561	Resolved an issue related to the report, "History of Cluster Capacity in VM Units" failing to load.

Table: 14.5.0 - August 17, 2022

Internal Reference	Team Support Reference	Description
CRB-51165	64765	Completed the updates required to resolve the issue related to performance of the Optimization Overview dashboard and the EC2 tab in the Densify UI. The required updates were started in the previous release.
CRB-52301	70069	Resolved an issue related to excluding hours from the Densify analysis.

Table: 14.4.0 - July 27, 2022

Internal Reference	Team Support Reference	Description
CRB-51165	64765	Resolved an issue related to performance of the Optimization Overview dashboard and the EC2 tab in the Densify UI. Additional performance updates will be delivered in the next release.
CRB-52166	69439	Resolved an issue related to data collection in very large environments when using the Java-based audit. Security tokens in the AWS client instance are now refreshed before they expire.

Table: 14.3.0 - June 1, 2022

Internal Reference	Team Support Reference	Description
CRB-50479	53628	Resolved an issue related to loading of a specific set of Azure audit data.
CRB-51641	51195	Resolved an issue related to a query running too long and blocking other jobs.
CRB-51914	67424	Resolved an issue related to the footnote not being visible after clicking on a savings opportunity value in the Public Cloud Optimization for AWS dashboard.
CRB-51974	67782	Resolved an issue related to VMs showing incorrect 'VM Memory HotAdd' status. The Densify Connector has also been updated to v2.2.4.6 to resolve this issue.
CRB-51983	67601	Resolved an issue with some GCP systems missing from the Densify reports.
CRB-52026	68013	Resolved an issue related to sizing recommendations in the Control Console that are not aligned with CPU utilization and cloud catalog options specified in

Internal Reference	Team Support Reference	Description
		the policy.

Table: 14.2.0 - February 16, 2022

Internal Reference	Team Support Reference	Description
CRB-51435	62498	Resolved an inconsistency in reporting of predictedUptime and totalHoursRunning.
CRB-51564	63508	Resolved an issue related to the collection of Azure subscriptions being capped at 1000.
CRB-51579	62740	Resolved an issue related to SLCO target host recommendations.

Table: 14.1.0 - December 8, 2021

Internal Reference	Team Support Reference	Description
CRB-50348	53956	Resolved an issue related to the Cloud System Sizing extension logic.
CRB-51076	59008	Resolved an issue related to using the Group By feature on the Containers > Data tab.
CRB-51136	59996	Resolved an issue related to how estimated effort is reported in the Densify UI and the API.
CRB-51139	58687	Resolved an issue related to an upsizing container request and limit values.
CRB-51208	60647	Resolved an issue related to using the drill down to the Instance Details, when working with customized groupings to filter data on the Public Cloud Optimization Overview page.
CRB-51290		Resolved an issue related to excluding the AWS Government platforms from the savings plan analysis.
CRB-51360	61183	Resolved an issue related to the following error message: Error updating database. Cause: java.sql.SQLException: Violation of PRIMARY KEY constraint.

Table: 14.0.0 - October 20, 2021

Internal Reference	Team Support Reference	Description
CRB-50085	50933	Resolved an issue related to Azure data collection failing due to ambiguous system matches. Storage accounts details are not used in any Densify analysis and have been removed from both the discovery and details data collection modules.
CRB-51076	59008	Resolved an issue related to using the Group By feature on the Containers > Data tab.

Resolved Issues - Densify Connector

Issues resolved in each release are listed below:

Table: 2.2.4.9 - December 21, 2022

Internal Reference	Team Support Reference	Description
CRB-52760	72867	Resolved an issue related to the set of cipher suites that are included in the JRE version. The installed JRE version has been updated to AdoptOpenJDK 11.0.10_9.
CRB-53839		Hotfix #1–Support shortname matching in VMware action automation.
CRB-54616	90296	Hotfix #2–Resolved a vROps connection issue.

Table: 2.2.4.8 - September 27, 2022

Internal Reference	Team Support Reference	Description
CRB-52683		Resolved an issue related to incomplete execution of Action Automation.

Table: 2.2.4.7 - August 30, 2022

Internal Reference	Team Support Reference	Description
DC-292	71376	Updated to include the Spring 5.3.19 jar files, as per CVE-2022-22950.

Table: 2.2.4.6 - June 1, 2022

Internal Reference	Team Support Reference	Description
CRB-51974	67782	Updated to address an issue related to VMs showing incorrect 'VM Memory HotAdd' status. Densify has also been updated to resolve this issue.

Table: 2.2.4.5 - March 11, 2022

Internal Reference	Team Support Reference	Description
CRB-51669		Updated to address an issue related to vROps data collection performance issues related to token-based authentication.

Table: 2.2.4.4 - February 4, 2022

Internal Reference	Team Support Reference	Description
CRB-51237		Updated to return a VMware data collection module used for custom integrations.
		You must re-install this version of the connector to get this update.

Table: 2.2.4.3 - January 7, 2022

Internal Reference	Team Support Reference	Description
CRB-51544		Updated to include the Apache 2.17.1 jar files, as per CVE-2021-45046 and CVE-2021-45105, after the issue was initially reported in CVE-2021-44228.
		You must re-install this version of the connector to get this update.

Table: 2.2.4.1 and 2.2.4.2 - January 4, 2022

Internal Reference	Team Support Reference	Description
CRB-51544		Updated to include the Apache 2.17.1 jar files, as per CVE-2021-45046 and CVE-2021-45105, after the issue was initially reported in CVE-2021-44228.
		To fix this security vulnerability, you must add the 4 files from the v2.17.1 jar to your connector installation. See *Updating the Apache Log4j Files* in the topic *Installing the Densify Connector* (Help Topic 380020) .

Table: 2.2.4.2 - December 16, 2021

Internal Reference	Team Support Reference	Description
CRB-51544		Updated to include the Apache 2.15 jar files, as per CVE-2021-44228.
		You must re-install this version of the connector to get this update.

Third Party Software Updates

The following table lists the changes to the list of third-party software in Version 14.8.x.

Refer to the .PDF file in the online help for a full list of third-party software.

Densify 14.8.0

Table: Open Source Third-Party Software Updates in Densify 14.7.0

Name	Version	Description	License	Status
Xmlsec	2.1.0	XML Security Library.	MIT License	Deprecated

There were no updates to the Go library, modified open source software or the commercial third party software included in 14.8.0.

Densify 14.7.0

Table: Open Source Third-Party Software Updates in Densify 14.7.0

Name	Version	Description	License	Status
XStream Library	1.4.4	Library to serialize objects to XML and back again.	BSD 3-clause "New" or "Revised" License	Deprecated

There were no updates to the Go library, modified open source software or the commercial third party software included in 14.7.0.

Densify 14.6.0

There were no updates to any of the third-party software included in 14.6.0.

Densify 14.5.0

There were no updates to any of the third-party software included in 14.5.0.

Densify 14.4.0

Table: Open Source Third-Party Software Updates in Densify 14.4.0

Software	Version	Description	License	Status
Antlr 3.4 Runtime	4.9.2	A framework for constructing recognizers, compilers, and translators from grammatical descriptions.	BSD 3-clause "New" or "Revised" License	Updated
Apache Commons Daemon	1.0.2	A library to support running a Java application as a daemon.	Apache License 2.0	Added
Apache Commons - Bean Scripting Framework (BSF)	2.4.0	A set of Java classes that provides scripting language support within Java applications and access to Java objects and methods from scripting languages.	Apache License 2.0	Added
Apache Commons Codec	1.15	Provides implementations of common encoders and decoders such as Base64, Hex, Phonetic and URLs.	Apache License 2.0	Updated
Apache Commons Configuration 2	2.2.4	A helper class used by PropertiesConfiguration to retain a properties file layout	Apache License 2.0	Corrected
Apache Commons FileUpload	1.4	This package allows the addition of robust, high-performance file upload capabilities to servlets and web applications.	Apache License 2.0	Updated
Apache Commons HttpClient	4.5.13	This library provides HTTP client functionality.	Apache License 2.0	Updated
Apache Commons HttpCore	4.4.15	A set of low-level HTTP transport components used to build custom client and server-side HTTP services with a minimal footprint.	Apache License 2.0	Updated
Apache Commons Lang	3.3.9	Provides extra functionality for classes in java.lang.	Apache License 2.0	Updated
Apache Commons Logging	1.2	Wrapper for a variety of logging API implementations.	Apache License 2.0	Updated
Apache HTTP Components	4.5.13	This tool creates and maintains a toolset of low-	Apache License 2.0	Updated

Software	Version	Description	License	Status
		level Java components for HTTP and associated protocols.		
Apache-Logging log4net	1.2.9-beta	Logging library.	Apache License 2.0	Deprecated
Apache ORO	2.0.8	A set of text-processing Java classes providing Perl5 compatible regex, AWK-like regex, global expressions, and utility classes for substitutions, splits, filtering filenames, etc.	Apache License 1.1	Deprecated
Apache XML-Crimson	1.1	Java XML parser.	Apache License 1.1	Deprecated
Apache XML-Commons	1.2	Common code and guidelines for XML projects.	Apache License 2.0	Deprecated
Apache XmlSchema	1.3.1	Lightweight Java object model to manipulate and generate XML schema representations.	Apache License 2.0	Deprecated
Apache-XML Xml Security	1.4.0	This library includes the standard JSR-105 (Java XML Digital Signature) API, a mature DOM-based implementation of both XML Signature and XML Encryption, as well as a more recent StAX-based (streaming) XML signature and XML encryption implementation.	Apache License 2.0	Deprecated
ASM	3.1	All-purpose Java bytecode manipulation and analysis framework.	Apache License 2.0	Deprecated
AutoValue	1.2	Immutable value-type code generation for Java 1.6+.	Apache License 2.0	Deprecated
AWS SDK for Java 2	2.17.159	Amazon API Gateway	Apache License 2.0	Updated
Code Project - OOP Minesweeper using JavaScript	1.0	Hidden Easter egg for minesweeper game.	Apache License 2.0	Deprecated
dom4j	1.6.1	Flexible XML framework for Java.	MetaStuff, Ltd	Corrected
DynamicJasper-core-fonts	2.0	Provides packaged fonts for use within reports.	LGPL-3.0 license	Added
Java API for XML Web Services (JAX-WS)	2.3.1	Java programming language API for creating web services.	Common Development and Distribution License 1.0	Updated
Jersey Core Common	2.27	Jersey core common packages.	CDDL v1.1	Updated
joda-time	2.10.14	Provides a replacement for Java date and time classes.	Apache License 2.0	Updated

Software	Version	Description	License	Status
JSR-311 - JAX-RS	2.8.5	Java API for RESTful Web services	Apache License 2.0	Updated
Lettuce Core	6.1.1	A scalable thread-safe Redis client for synchronous, asynchronous and reactive usage	Apache License 2.0	Updated
Mentalis .NET Security Library	1.0.13.718	A .NET security library used by Windows agent and proxy	License for .NET Security Library	Updated
netty	4.1.75	An asynchronous event-driven network application framework and tooling.	Apache License 2.0	Updated
PhantomJS	2.1.1	PhantomJS is a headless web browser scriptable with JavaScript.	BSD 3-clause License	Deprecated
Snakeyaml	1.27	YAML 1.1 parser and emitter for Java.	Apache License 2.0	Deprecated
Spring Framework	5.3.19	Application framework and inversion of control container for Java platforms.	Apache License 2.0	Updated
xmlbeans	2.6.0	XMLBeans allows you to access XML by binding it to Java types.	Apache License 2.0	Corrected

Go Libraries Included with Densify 14.4.0

Name	Description	License	Status
github.com/icza/gox	Lightweigt extension to Go.	MIT	Added
github.com/imdario/mergo	A helper to merge structs and maps in Golang.	BSD 3-clause "New" or "Revised" License	Added
github.com/json-iterator/go	A high-performance 100% compatible drop-in replacement of "encoding/json".	MIT	Added
github.com/jszwec/csvutil	Library for mapping between CSV and Go structs.	MIT	Added
github.com/spf13/pflag	pflag is a drop-in replacement for Go's flag package, implementing POSIX/GNU-style --flags.	BSD 3-clause "New" or "Revised" License	Added
github.com/spf13/viper	Viper is a complete configuration solution for Go applications.	MIT	Added

Table: Modified Open Source Software Included with Densify 14.4.0

Name	Version	Description	License	Status
JasperReports Library	6.19.1	Bug fixes	GNU Lesser General Public License v3	Updated

There were no updates to the commercial third party software included in 14.4.0

Densify 14.3.0

Table: Open Source Third-Party Software Updates in Densify 14.3.0

Name	Version	Description	License	Status
ApacheTomcat	9.0.62	An open source implementation of Java Servlet, JavaServer Pages, Java Exp Language and Java WebSocket technologies.	Apache License 2.0	Updated
Spring Framework	5.2.20	Application framework for Java, used by the JasperReports Server.	Apache License 2.0	Updated

Go Libraries Included with Densify 14.3.0

Name	Description	License	Status
cloud.google.com/go/monitoring v1.1.0	This package provides a Go client library for Cloud Monitoring API.	MIT	Added
github.com/google/uuid v1.3.0	This package generates and inspects UUIDs based on RFC 4122 and DCE 1.1: Authentication and Security Services.	BSD-3-Clause	Updated
github.com/launchdarkly/go-ntlm-proxy-auth v1.0.1	This package allows programmers to connect to http/https servers protected by an NTLM proxy in Golang.	MIT	Updated

Table: Commercial Third Party Software Included with Densify 14.3.0

Name	Version	Description	License	Status
Tibco JasperReports Server Professional	8.0.1	Embedded Business Intelligence (BI) platform that provides rich reporting and visualization	Paid Commercial License	Updated

There were no updates to the modified open source software included in 14.3.0

Densify 14.2.0

Table: Open Source Third-Party Software Updates in Densify 14.2.0

Name	Version	Description	License	Status
GraphQL	17.2	The Java implementation of GraphQL.	MIT	Updated

There were no updates to the Go library, modified open source software or the commercial third party software included in 14.2.0.

Densify 14.1.x

Table: Open Source Third-Party Software Updates in Densify 14.1.x

Name	Version	Description	License	Status
Apache Log4j	2.17.1	Java logging library.	Apache License 2.0	Updated

There were no updates to the Go library, modified open source software or the commercial third party software included in 14.1.x.

Densify 14.0.0

Table: Open Source Third-Party Software Updates in Densify 14.0.0

Name	Version	Description	License	Status
Apache Commons Pool2	2.9.0	This tool provides an object-pooling API.	Apache License 2.0	Added
gRPC-Services	1.34.1	Google RPC framework that can run in any environment, for microservice communication.	Apache License 2.0	Updated
Jackson	2.11.3	Multi-purpose Java library for processing.	Apache License 2.0	Updated
Jackson Dataformat YAML	2.11.3	Support for reading and writing YAML-encoded data via Jackson abstractions.	Apache License 2.0	Added
Jackson SnakeYAML	1.27	YAML 1.1 parser and emitter for Java.	Apache License 2.0	Added
Jakarta XML Binding API	3.0	Jakarta XML Binding API.	EDL 1.0	Added
JMX Export SnakeYAML	1.16	YAML 1.1 parser and emitter for Java.	Apache License 2.0	Deprecated
Lettuce HDR Histogram	2.1.12	A High Dynamic Range (HDR) Histogram.	BSD 2-Clause License	Added
Lettuce Latency Utilities	2.0.3	A package that provides latency recording and reporting utilities	Creative Commons CC0 1.0	Added
Lettuce Core	6.1.1	A solution for saving files on the client-side.	Apache License 2.0	Updated
Lettuce Micrometer Core	1.6.5	An application monitoring instrumentation facade.	Apache License 2.0	Added
Lettuce Reactive Streams	1.0.3	A protocol for asynchronous non-blocking data sequence.	Creative Commons CC0 1.0	Updated
Lettuce Reactor Core	3.3.16	A solution for saving files on the client-side.	Apache License 2.0	Updated

Name	Version	Description	License	Status
Netty	4.1.63	An asynchronous event-driven network application framework and tooling.	Apache License 2.0	Updated
Postgres SQL	42.2.16	Object-relational database system.	PostgreSQL License	Added
Snakeyaml	1.16	YAML 1.1 parser and emitter for Java.	Apache License 2.0	Added
Spring Framework	5.2.20	Application framework for Java, used by the JasperReports Server.	Apache License 2.0	Updated

Go libraries were added in 14.0.0 as part of the new audit framework. Refer to the online help for a full list of added Go libraries.

There were no updates to the modified open source software or the Commercial Third Party softwar included in 14.0.0.