

## Version 9.0 Release Notes

### What's New in RiskVision v9.0

RiskVision 9.0 introduces multiple new features and improvements that are described below. These enhancements are grouped as follows:

- Integration with SOAR 2017.1 release stream
- Entity Grid enhancements
- Security Enhancements
- Other Improvements

### Integration with SOAR 2017.1 Release Stream

The SOAR 2017.1 release stream delivered many key enhancements. These enhancements have been merged into the 9.0 release. The most significant features are covered below.

#### Threat Object and UI Enhancements

Threat intelligence is essential to know which vulnerabilities are being actively exploited, to gain context for responding to incidents, and for creating a plan to mitigate the threats an organization is facing. The 9.0 release introduces a threat object to allow organizations to systematically incorporate threat intelligence into their operations.

To facilitate the incorporation of threat intelligence into a company's operations, the RiskVision data model now includes many-to-many data associations of threats with other objects, such as assets, vulnerabilities, incidents, and tickets. This is important because it allows organizations to better measure risk and assign and track mitigations.

The RiskVision 9.0 release provides both high-level and detailed views of threat intelligence. At the highest level, there are new grids that provide multiple ways to view threat intelligence data, such as My Threats, Recent Threats, All Threats, Threat Intelligence, Malware, and Threat Actors. These grids can be further filtered, sorted, and searched, enabling users to quickly identify the threat intelligence data that is most relevant to them.

Threat detail panes present various information about each threat, including a link to the full threat report in the threat intelligence feed, a description, owner, severity level, likelihood, risk level, and a threat intelligence report synopsis. These detail panes also show the vulnerabilities, incidents, and tickets that are associated with a given threat.

#### Threat Intelligence Data Feed Integrations

For this release, RiskVision 9.0 is providing integration with the CrowdStrike Falcon Intelligence and FireEye iSight threat intelligence feeds. For CrowdStrike, RiskVision is importing threat actors, periodic reports, tipper reports, alerts, and IOCs. For FireEye, RiskVision is importing threats, malware, and vulnerability advisories.

#### Correlation of Threats with Vulnerabilities

To help users prioritize both threats and vulnerabilities, when a threat intelligence source links a threat or an IOC with one or more CVEs, RiskVision will automatically correlate the threat and associated vulnerabilities. RiskVision will also correlate the threat to any assets that have a vulnerability that a threat is linked to, thereby providing a view of which threats have the potential to affect your most critical assets.

## Attribution of Threats to Incidents

Organizations are constantly being attacked, and inevitably some of these attacks will be successful. To limit the harm and minimize the time to respond to events that have a high probability of being an incident, RiskVision SOAR allows for threats to be attributed to incidents. When you know a threat is attributed to an incident, you can increase the incident severity, which can result in RiskVision assigning a rapid response process to the incident.

## Threat-related Vulnerability Risk Scoring Enhancements

Organizations have many more vulnerabilities than they can remediate within a timely basis. Assigning a risk score provides visibility to which vulnerabilities are the riskiest, and therefore should be addressed first. Effective with this release, RiskVision's vulnerability risk score now includes a Threat Factor. The Threat Factor increases the risk of vulnerability by a predefined multiplier if there is a threat that is targeting vulnerability. Combined with the existing Asset Criticality Factor, Exploit Factor, and other existing variables, the vulnerability risk score will help organizations better understand the relative risk of a vulnerability being exploited and prioritize remediation decisions accordingly.

## Threat Mitigation Tracking

Given that a threat is a person or thing that is intending to cause harm to an organization, it is important to be able to mitigate threats, and to track these mitigation efforts. To facilitate this, RiskVision now allows organizations to create tickets against threats. These tickets will be associated with a predefined workflow based on workflow settings and ticket attribute values. This allows for different mitigation processes to be automatically instituted for different threat types, such as threat actor and malware, which will increase response effectiveness.

## Metrics Generator Enhancements

The only way organizations can know if they are getting better at protecting against cyber security risk is to focus on measuring and improving important metrics. The Metrics Generator feature enhancements done for this release enable organizations to define virtually any measurement they want to track, and measure its performance over time. These metrics can be generated on a daily, weekly, or monthly basis. Examples of metrics that can be tracked include average number of vulnerabilities per computer per business unit, ticket mean time to resolution by workflow stage, and average compliance score by BU. Combined with RiskVision's robust business intelligence engine, organizations can generate both high-level and detailed reports to provide the required level of visibility to end users so that metrics can be effectively tracked and improved.

## Improved Affected Assets Page

The Affected Assets page automatically groups assets that have a vulnerability by similar characteristics of the related assets, such as by OS title/vendor/version with asset criticality and owner. This grouping is intended to allow you to create a single ticket for each asset group, instead of one for each vulnerability instance, which could result in hundreds, thousands, or tens of thousands of tickets.

The new page uses a job that runs periodically to update this page for every vulnerability. Having this data already calculated when a user opens the page results in an instantaneous loading of the page, even when there are many thousands of instances of a vulnerability.

# Entities Grid Enhancements

RiskVision 9.0 provides several enhancements to the Entity Grid. These enhancements include those listed in the below sections.

## IP Addresses Column

The Entities Grid now provides an option to display a new column for IP address. This will make it much easier for organizations that use IP address as a primary system identifier to work with their IT assets. Like other columns, the IP Address column can be sorted in ascending or descending order. Also, when the IP Address column is showing, the Entities Grid still supports bulk edit, searching, and filtering operations.

### **New Dynamic Group for Assets with IP Addresses**

The Entities Grid now contains a new Dynamic Group that shows all entities that have an IP address. This new Dynamic Group aggregates all entities of type Computer, Network Device, and Mobile Phone in a single view.

### **Ability to Search for Multiple IP Addresses in a Single Search**

Effective with this release you can now search for multiple IP addresses within a single search by using comma-separated IP addresses. This will enable you to more rapidly search for entities that have specific IP addresses.

## **Security Enhancements**

Due to the sensitive data that you store in RiskVision, security is a top priority to Resolver. RiskVision 9.0 contains several important security enhancements.

### **Server-Specific Master Encryption Key**

Effective with this release, every RiskVision installation will have a master encryption key. This provides an added layer of security, but does require special precautions that are mentioned in the RiskVision Installation and Configuration Guide under the “Configuring a Unique Encryption Key” topic.

### **Upgraded Third Party Components and Libraries**

Many of the third-party components and libraries used in RiskVision have been upgraded in 9.0 to take advantage of vulnerability fixes in these components and libraries.

### **Pen Test and Vulnerability Scan Fixes**

Resolver and its customers have performed vulnerability scans and pen tests of the RiskVision platform. Findings of Medium or higher were fixed in this 9.0 release and are listed in the Fixed Issues section of this release notes document.

## **Improvements**

| Key      | Support Ticket ID | Summary   |
|----------|-------------------|---|
| RV-38301 |                   | The 'Properties' file can no longer be uploaded from the Administration user interface because it was responsible for a vulnerability.  |
| RV-43483 |                   | The default database connection pool configuration, which is applicable to both MySQL and Oracle, has been fine-tuned for better performance.   |
| RV-44180 | 11943             | Multiple findings with multiple responses can now be imported using the Finding Import Template.  |
| RV-44817 | 12091             | Delegations can now occur at the first stage of exception workflows.  |
| RV-45917 | 12545             | Connector alerts are now being sent to the Events page and can be configured to be sent by email.   |
| RV-45946 |                   | Added additional custom script jobs.  |
| RV-46660 | 12832             | It is now possible to search multiple IP addresses within the same search by placing commas between the IP addresses and using the "contains" search operator.  |
| RV-46661 | 12833             | A Dynamic Group for all entity types with IP addresses now exists within RiskVision.  |
| RV-46667 | 12830             | RiskVision's password reset function now provides separate messages for users who authenticate directly to RiskVision and users who authenticate to an external LDAP source. The message to users who authenticate to an external LDAP source informs the users that they need to contact the administrator of their external LDAP source to reset their passwords. |
| RV-46760 | 12911             | Now, assessment workflows will be moved backwards without considering the option "Allow incomplete submission".   |
| RV-47587 | 23948             | Now automated backups of RiskVision can be made without the associated server/data folder.  |

## Fixed Issues

| Key      | Support Ticket ID | Summary   |
|----------|-------------------|---|
| RV-43711 | 11796             | Improved LDAP-related error logging to be more relevant to improper user actions or wrong configuration details.  |
| RV-45219 |                   | Instituted multiple permissions checks in order to address discovered Authorization Bypass issues.  |
| RV-45337 | 12244             | Relationship data can now be imported more rapidly through connectors.  |
| RV-46187 | 12644             | The Tickets and Exception Requests pages can now be modified through the UIDictionary.xml file.   |
| RV-46503 | 12740             | JasperReports Server has been upgraded to 6.4.2 to address the CVE 2017-5532 and CVE 2017-5533 vulnerabilities.   |
| RV-46562 | 12598             | Dynamic Group filters are now getting applied at the Program level.   |
| RV-46717 | 12895             | The RiskVision JasperReports Server installation can now be configured with a hostname instead of an IP Address to facilitate server failover.                  |
| RV-46787 | 12952             | Users no longer receive a permission denied error on the Vendor Risk Manager Vendor tab.  |
| RV-46790 | 12943             | Comments in exported questionnaires are now always recorded.  |
| RV-46819 | 12875             | Assessments can now be opened when the RiskVision instance is running on Oracle 12.2.x  |
| RV-46838 |                   | Custom attributes for system users are now correctly displayed in the user interface.   |
| RV-46843 | 12995             | JasperReports Server dashboard drill-down functionality to RiskVision pages is now working properly within the specific environment that previously had issues. |
| RV-46918 | 13007             | A customized finding definition no longer encounters null pointer exceptions upon the execution of save operations.   |
| RV-46930 |                   | Advanced Filter text fields can now support up to 800 characters.   |

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|----------|---------------|--|
| RV-46931 |               | Users can now upload documents while editing tickets.  |
| RV-46943 |               | Object IDs are now encrypted when a user is performing a drill-down to another report in JasperReports Server.                     |
| RV-46945 |               | The Affected Entities owner groupings can now reflect only the Primary Owner.  |
| RV-46946 |               | Users with the Assessment Work On permission are no longer allowed to define stakeholders at any stage of the assessment workflow. |
| RV-46948 |               | Users are now able to access R6 Report and Dashboard tree nodes with the proper configuration.                                     |
| RV-46964 |               | Documents in tickets with titles containing special characters can now be exported without any errors.                             |
| RV-46973 | 20688 & 22204 | Fixed an issue where entities imported from a connector with specific attributes set could not be deleted.                         |

| Key      | Support Ticket ID | Summary  |
|----------|-------------------|--|
| RV-46975 | 20552             | The Maximo Connector is now correctly importing data.  |
| RV-46989 | 20755             | Both Kerberos and SAML are now covered in the Installation and Configuration Guide.  |
| RV-47044 |                   | Error messages are no longer observed when assessment reminder notifications are sent.   |
| RV-47053 | 21067             | The Residual Risk score for findings can now be correctly set back to N/A.   |
| RV-47056 |                   | All evidence files from a specific survey can now be downloaded without any errors.  |
| RV-47105 |                   | An issue in which alerts were shown to select users even though there was nothing in the users' To-Do items list no longer occurs. |
| RV-47120 |                   | Roles and permissions no longer need to be reloaded when a new role is created by connectors to see them in the RiskVision UI.     |
| RV-47131 |                   | An issue with database upgrade from RiskVision 8.5HF1 to 8.5HF3, is no longer observed   |
| RV-47148 |                   | The Program Updater Job no longer occasionally throws errors.  |
| RV-47149 |                   | Addressed several issues with the Bulk Attachments Download feature introduced in 8.5 HF3.   |
| RV-47181 |                   | The Bulk Attachments Export feature now works while tickets and findings are in a closed state.                                    |
| RV-47190 | 22068             | Null Pointer Exceptions no longer occur when encrypting files as part of the upgrade process from versions 7.5 or lower.           |
| RV-47197 | 22136             | Removed ability to upload the agiliance.properties file from the RiskVision UI.  |
| RV-47199 |                   | Improved the way RiskVision handles questionnaires with no comments.   |
| RV-47203 | 21259             | The vendor hierarchy structure now correctly displayed in the left panel after importing vendors.                                  |
| RV-47221 |                   | Fixed XML External Entity vulnerabilities by disabling the External Entity feature in the parsers.                                 |

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| RV-47222 |       | Fixed an issue where the /spc/generalrv/AgllIncidentReporter.jsp was reachable even when the user was not logged in. |
| RV-47223 |       | Removed obsolete file from RiskVision that is not being used.  |
| RV-47224 |       | Removed the Token Integration feature that was used to access R6 dashboards inside external applications.            |
| RV-47283 |       | The Bulk Attachment Download feature no longer occasionally fails to create zip directories.                         |
| RV-47294 | 21965 | Jasper Report filter widgets now appear properly for Internet Explorer.  |
| RV-47359 | 22771 | Users can now be searched with the user ID.  |

| Key      | Support Ticket ID | Summary  |
|----------|-------------------|--|
| RV-47372 | 22136             | To address a security issue with the R6 Reporting SQL Custom Query functionality, the feature has been hidden by default and will only be exposed for RiskVision instances that have a special license key. Even for the RiskVision instances that have the special license key, users will not be able to access the custom SQL functionality unless they have the Configure UI permission. |
| RV-47380 |                   | RiskVision now has defenses against CSV Formula Injection attacks.   |
| RV-47381 |                   | RiskVision is now making use of a dynamically generated, installation-specific cryptographic key.  |
| RV-47382 |                   | The password reset page has been hardened.   |
| RV-47383 |                   | There is now a centralized way to disable the use of Fusion Chart's Flash component.   |
| RV-47384 |                   | Encrypted object ID validation has been hardened.  |
| RV-47422 |                   | New post-installation scripts have been created to address issues that may occur when RiskVision databases are migrated from one server to another.  |
| RV-47427 |                   | The RiskVision import module now provides generic messages, as opposed to technical error message that may be used to gather information regarding the internal structure of the server and build more advanced attacks against the system when a user attempts to upload a file with a disallowed extension.  |
| RV-47432 |                   | IO errors no longer occur when downloading attachments.  |
| RV-47448 | 23020             | The disabling of assessment launch notifications no longer prevents workflow transition notifications in the reverse direction.  |
| RV-47472 | 23191             | The feature to update the Inherent Risk Score with the related risk's default values when the Inherent Risk's value is N/A has been made more intuitive and has been documented.   |
| RV-47476 |                   | Fixed multiple cross-site scripting issues.  |
| RV-47499 | 22900             | Assessment workflow stage transitions for 100% complete questionnaires now take less time.   |

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| RV-47503                         |       | Additional ownership checks have been added to ensure that a user with the proper permissions, but without the proper ownerships to the related entity, will no longer be able to access the assessment's questionnaire.   |
| RV-47531, RV-47532, and RV-47533 |       | Hardened API security  |
| RV-47593                         | 23870 | When migrating draft content to a versioned state in the Enterprise Risk Manager application all controls within an assessment will no longer automatically be set to "In Use" irrespective of the "in Use/Not in Use" value selected prior to the content versioning process. |

## Known Issues

| Tracking ID  | Description  |
|--|--|
| RV-22319   | Not all Microsoft® Word documents can be imported as RiskVision policy documents.<br><b>Workaround:</b> Most issues can be resolved by manually editing the imported document or copying and pasting one section at a time.  |
| RV-24010   | The default choice template (a drop-down list) does not work with table type questions.<br><b>Workaround:</b> Create a new choice template for use with table type questions.  |
| RV-29911<br>RV-29915<br>RV-35429<br>RV-35741<br>RV-36862<br>RV-36717<br>RV-40613<br>RV-40620 | Preferred ownership issues: <ul style="list-style-type: none"> <li>Viewing assessment details in a program can reveal all stakeholders in the workflow, rather than only the preferred owners in the current stage.</li> <li>Enabling preferred ownership on a workflow that is already in use, only applies to new, subsequent preferred ownership assessments that use the workflow.</li> <li>Deleting preferred ownership from controls after the launch of assessments does not change the assignment of controls to stakeholders.</li> <li>If the preferred ownership of content is added at the control level and that content in the program is added at the group level, then duplicate controls will be created when that program is edited or assessments within that program are restarted.</li> </ul> <b>Workaround:</b> Assign the preferred ownership at the same level as the content added in a program. For example, if the preferred ownership is assigned to the content at the group level, assign the content to the program at the group level. If the preferred ownership is assigned to the content at the control level, assign the content to the program at the control level. <ul style="list-style-type: none"> <li>Preferred ownership works only in the first stage of assessment workflows with branching.</li> </ul> Controls assigned to the assessment stakeholders do not get updated after editing the program to select the following program option: <b>Do not assess controls with preferred ownership configured when the entities being assessed have no owners that correspond to the preferred owners associated with the control.</b> |
| RV-30240   | A custom dashboard or chart that uses the "comment" column from the <b>agl_ramitigation</b> table will fail to execute the query.<br><b>Workaround:</b> To execute the custom query successfully, rename the comment column to <b>mitigation_comment</b> .   |
| RV-31601   | When controls and sub-controls are updated, the cache does not update immediately.<br><b>Workaround:</b> Wait a few minutes for the controls and sub-controls to be updated in the relevant assessments.   |
| RV-33240   | When propagation is enabled, answering the parent entity assessment will not update the scores of its child entities available on the <b>Assessments</b> tab of the <b>Program</b> details page, whereas the scores are updated correctly on the <b>Control Results</b> tab of the <b>Assessment Details</b> page of the parent.<br><b>Workaround:</b> To update the scores, select the child entity and then choose to <b>Propagate Control Results</b> from the More Actions drop-down list.   |
| RV-33301   | When a user tries to run a Jaspersoft report after logging out of the RiskVision application, the report appears to run but is not rendered, because the user has logged out. The reason the report appears to run is that the Jaspersoft user interface is still available.<br><b>Workaround:</b> To prevent this from occurring, simply close the browser with the Jaspersoft application running.   |



| Tracking ID | Description  |
|-------------|--|
| RV-33316    | <p>Creating a <b>Table</b> chart type of Policies no longer executes the query. This issue persists only with the Oracle database.</p> <p><b>Workaround:</b> To build the chart without any errors, ensure that the <b>Selected Columns</b> contain any string type column at the top and the <b>Audience</b> column is moved down the selected list.</p>  |
| RV-35412    | <p>It is impossible to undo the risks added to an assessment even if the stakeholder changes the answer choice from any assessment workflow stage.</p> <p><b>Workaround:</b> Manually delete the erroneously identified risks.</p>   |
| RV-36406    | <p>Adding the same input control multiple times when importing a RiskVision chart does not help produce the desired results.</p> <p><b>Workaround:</b> If there is a need to have the same input control more than once, create a new input control with a different resource ID.</p>  |
| RV-36472    | <p>It may not be possible to create an assessment that contains a dynamic group of more than 17,000 entities.</p> <p><b>Workaround:</b> Whenever a dynamic group contains more than 17,000 entities; split the excess entities into a separate dynamic group and then run the assessment.</p>  |
| RV-36615    | <p>It is impossible to export JasperReports Server Fusion charts to formats other than PDF and HTML.</p>   |
| RV-37639    | <p>The schema name is saved in the database as uppercase even if the user entered lower case while creating the schema:</p> <ol style="list-style-type: none"> <li>1. Whenever hyphens are used in the schema name during import, the schema name is getting converted to upper case. Example "schema-name" is changing to SCHEMA-NAME.</li> <li>2. When an export is performed with the original name (schema-name in lower case), a "schema not found" error message is being thrown. Export is working fine though if the schema name is given in uppercase.</li> </ol> <p><b>Workaround:</b> Please don't use hyphens in schema names; if required though, please reference the schema name always using upper case.</p> |
| RV-37753    | <p>Risks are not getting auto-identified text-type sub controls are failed and scoring for text type questions is enabled in Questionnaire Presentation Options.</p>   |
| RV-37965    | <p>The Jasper Reports Server installation fails if the length of the installation path is longer than the maximum allowed by Windows, which is currently 260 characters.</p>   |
| RV-38326    | <p>The <b>JasperReports Tomcat</b> service fails to start on a computer if the Jasper Reports Server installation path contains special characters, such as \$, %, &amp;, and @. The service does not start even when it is attempted manually.</p>  |

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| RV-39271 | <p>A user with an assigned 'Vulnerability severity' filter is getting an error message while accessing the entity. To overcome this error, you need to use "Entity Vulnerability General.Severity for this entity" as a condition instead of "Vulnerability General.Severity".</p>   |
| RV-39409 | <p>It is not possible to advance a workflow stage if each workflow stage is assigned a team of more than 200 stakeholders.</p>   |
| RV-39650 | <p>Control results are not propagated down to related entities if multiple assessments for the related entities are created after the controls results have been propagated by the source entity.</p> <p><b>Workaround:</b> Execute the "Propagate control results" from the "More Actions" drop-down selector on the Programs -&gt; Assessments page.</p> |

| Tracking ID | Description  |
|-------------|--|
| RV-41364    | <p>Entities cannot be copied if they are imported into RiskVision without a primary owner.</p> <p><b>Workaround:</b> After importing entities into RiskVision, assign a primary owner to all the entities and then copy the entities.</p>  |
| RV-42362    | <p>A user with Entity filters condition of '-Classification. Internal or external' is getting an exception while running a report.</p> <p>Workaround:<br/>The "Classification. External or internal" attribute shouldn't be used within any filter conditions. If a filter with such a condition is needed, it should use the Entity. Internal or External" attribute instead.</p>   |
| RV-42602    | <p>Failed to retrieve the entities to the user with filter condition - 'EntityCustomAttributes_CustomText_1'</p> <p>Workaround:<br/>The filtering based on columns of CLOB type is not supported within Risk Vision server. Any report attribute to be excluded from filtering must be marked as a non-filterable ('filterable="false"') in the ReportAttributes.xml file.</p>   |
| RV-42629    | <p>Data in RiskVision doesn't honor the 'EntityCustomAttributes_CustomEncryptedString_1' filter</p> <p>Workaround:<br/>Any report attribute to be excluded from filtering must be marked as non-filterable ('filterable="false"') in the ReportAttributes.xml file<br/>ACL filters with conditions based on encrypted fields do not work.</p>  |
| RV-42839    | <p>Unable to load data to the User with Incident filter condition of '-Incident_Incident_Comment'</p> <p>ACL filtering based on columns of CLOB type is not supported within Risk Vision server.</p> <p>Workaround:<br/>To prevent report attributes based on CLOB or similar columns to be displayed in Filter Manager's filter condition field list, the report attributes must be marked as non-filterable ('filterable="false"') in ReportAttributes.xml file.</p>   |
| RV-42991    | <p>Exceptions requested from Home-Exception Requests are not displaying in the Exceptions tab and Control results drill down.</p> <p>Workaround:<br/>Create the exceptions at the assessment level, and not on the Home -&gt; Exceptions page.</p>   |
| RV-43058    | <p>The filter condition Entity Custom Attributes. Custom Rational Number 3 is generating an error.</p> <p>Workaround:<br/>Add the CustomAttributes extensions for Float in the following way in the ReportAttributes.xml file under<br/> <pre>&lt;Group name="AssetCustomAttributes"&gt; &lt;Attribute name="Asset.CustomAttributes.CustomAttributes.float1" displayname="Custom Rational Number 3" datatype="float" category="%Asset% Custom Attributes"&gt;&lt;/Attribute&gt;</pre> Restart Tomcat Services.</p> |

| Tracking ID | Description  |
|-------------|--|
| RV-45781    | <p>7.0 to 8.5HF2 Upgrade - Unable to login to Standalone Jasper (With RV user or sysadmin)<br/> Workaround:<br/> After upgrading RiskVision, perform the following steps if you want to login to Standalone Jasper:</p> <ol style="list-style-type: none"> <li>1. Login to RiskVision with a user having admin privileges</li> <li>2. Click on 'R7 Analytics' and observe that Jasper home page is displayed</li> <li>3. Navigate to Manage-&gt;Users</li> <li>4. Click on 'Add User' and fill the necessary details</li> <li>5. After the user is created, go to %Home%\Reportserver\ReportServer\postgresql\bin folder and open'pgAdmin3'</li> <li>6. Once connected to DB, view data of 'jiuser' table</li> <li>7. Copy the password of the newly created user and paste it for a sysadmin or rvjasperuser user and save the changes.</li> <li>8. Restart Jasper services</li> <li>9. Verify that sysadmin or rvjasperuser user can login to Jasper standalone using the new password.</li> </ol> |
| RV-46606    | <p>Horizontal scroll bars are missing in JasperReportsServer dashboards that require horizontal scrolling. This is a bug in JasperReports Server version 6.3.0 and will be fixed in a future JasperReports Server release.</p>   |

## Related Documentation

Please refer to the following end-user documents for additional information:

- RiskVision Installation and Configuration Guide
- RiskVision Upgrade Guide
- RiskVision Administrator's Guide
- RiskVision Application User's Guides:
  - RiskVision Compliance Manager User's Guide
  - RiskVision Enterprise Risk Manager User's Guide
  - RiskVision Incident Manager User's Guide
  - RiskVision Policy Manager User's Guide
  - RiskVision Threat and Vulnerability Manager User's Guide
  - RiskVision Vendor Risk Manager User's Guide
- RiskVision Analytics Guide

These and other helpful information can be found in the Resolver Customer Support Portal. Here you can:

- Search the RiskVision Knowledgebase for answers to your questions
- Gain access to RiskVision technical documentation, how-to videos, and best practices guides

- Review your case history
- Submit new questions, problems, or issues

## Minimum Hardware Requirements

The following hardware requirements represent the minimum system requirements to install Resolver RiskVision software. The recommended requirements will vary according to each customer's use cases and will be provided by your solution architect.

| Hardware                  | Minimum                            |
|---------------------------|------------------------------------|
| Total number of CPU cores | 8                                  |
| Memory                    | 16 GB                              |
| Disk Space                | At least 100 GB of free disk space |

*UPS is recommended for power management.*

## Supported Versions

This release supports the following versions of third-party software:

| Product                      | Version   |
|------------------------------|---|
| Operating System             | Microsoft® Windows Server 2008 R2 SP1 Standard x64 Edition and Windows Server 2012 R2 Standard x64, Windows Server 2016 |
| Java JRE                     | 1.9.0.4   |
| Apache Tomcat                | 8.5.28  |
| Apache Web Server            | 2.4.31  |
| Apache OpenOffice            | 4.1.4   |
| Jasper Reports Server        | 6.4.2   |
| MySQL                        | Server – 5.7.21<br>Java Connector - 5.1.39  |
| Oracle                       | 12.1.0.2  |
| PostgreSQL                   | 9.3   |
| Web Browser                  | Microsoft Internet Explorer 11<br>Mozilla Firefox®, Google Chrome, and Microsoft Edge                                   |
| Adobe® Flash browser plug-in | Adobe® Flash Player, version 11(optional)   |

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## **Changes**

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