RiskyProject Enterprise 7.1

Project Risk Management Software

RiskyProject Enterprise User Guide

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Chapter 1: Introduction to RiskyProject Enterprise
About RiskyProject Enterprise

RiskyProject is a project risk management software. RiskyProject can be configured as standalone desktop software, which saves files to the set of files for each project, or enterprise software, which saves data in the database. As the same installation package is used for both desktop and enterprise versions of the software, switching from one version to another is quick and easy. You can switch from one configuration to another using the RiskyProject License Wizard. RiskyProject Enterprise is a flexible project portfolio risk analysis and management system.

The enterprise system is comprised of three main components:

**RiskyProject Server:** The server contains the RiskyProject database. For the current version of RiskyProject, the server can be run on a Microsoft SQL Server. The database contains all project and risk data including Monte Carlo simulation results.

**RiskyProject Enterprise Desktop Client:** The enterprise client is required to perform quantitative risk analysis and management. The client used with enterprise software can be the Professional, Lite, or Risk Register modules. If enterprise client is RiskyProject Professional or RiskyProject Lite, the enterprise client includes three Portfolio views: Risked Projects view, Portfolio Gantt view and Project Portfolio view. These are portfolio-level views of project schedules and costs.
RiskyProject Installation and Configuration

Before you start working with RiskyProject Enterprise, the RiskyProject database must be configured and user names, passwords and portfolio settings must be defined. Please read the RiskyProject Enterprise Administrator’s Guide for additional information.

About RiskyProject License Types

When you start RiskyProject Professional and RiskyProject Lite for the first time on your computer, you will be prompted to define the license type or mode of RiskyProject operation. When installing RiskyProject, you may choose between three installation modes:

- **Enterprise Client Mode**: RiskyProject will be connected to the database. In this mode, you can save projects to the database or in a file format. In addition, this mode contains additional views (Portfolio Gantt, Project Portfolio and Risked Projects) for managing and analyzing your project portfolio. You must have an enterprise client license to enable this mode.

- **Regular Desktop Mode**: the desktop license is not connected to a database (standalone RiskyProject). Projects can only be saved in RiskyProject’s file format (*.alm).

- **Trial Mode**: the trial license is a full version of the desktop license that can be used for 30 days, at which time you must enter a license code to continue using the software.

About This Document

Installed versions of RiskyProject Professional, RiskyProject Lite and RiskyProject Risk Register can be connected to the database or run as standalone desktop applications.

This document describes only specific features of the RiskyProject Enterprise desktop client (features which apply when RiskyProject is connected to the database). For all other features, which are identical in Enterprise client mode and Regular desktop mode, please consult with the RiskyProject User Guide or Getting Started with RiskyProject Guide.

Updating Your License

If you have recently purchased or upgraded your license, you must update it.

To update your license type:

1. Click the Tools tab. In the RiskyProject Configuration group, click Update RiskyProject License. The License Wizard opens.
2. Select the license type (Trial, Regular or Enterprise). If you have already activated your license, only the alternate license type will be available.
3. Click Next.
4. If you selected Regular Desktop license and did not validate your license code on your computer before, input your new license code and click Next.
Logging on to RiskyProject Enterprise

To logon to RiskyProject Enterprise, you must have a database connection set up.

To logon:
1. Launch RiskyProject. The Logon window opens.
2. Enter in your name and password.
3. Click OK.

When logging on to RiskyProject Enterprise, you may switch your desktop or trial license by clicking on Start regular desktop license (no database).

Switching Between Enterprise and Standalone Desktop Configurations

You may switch between Enterprise and Standalone desktop configurations of RiskyProject, and vice versa, at any moment. To do so, use the Update RiskyProject License button under the Tools pane on the toolbar.

- If you switch from Enterprise configuration to standalone desktop configuration you must have a license for RiskyProject standalone on your computer. If an Enterprise configuration is saved in the database, the standalone license will be saved in the Windows registry.
- If you switch from standalone desktop configuration to enterprise configuration, you need to define database connection properties in the manner outlined in the RiskyProject Enterprise Administrator’s Guide.
- If you are in Enterprise mode, you may want to connect to a different database. Click on Update RiskyProject License and select Enterprise: update database parameters. You will be prompted to define database connection properties.

You may switch from Enterprise configuration to standalone desktop configuration by clicking on Start regular desktop license (no database) using the RiskyProject Enterprise logon dialog.
Chapter 2: Managing Projects
About Organizing Your Project Portfolio

You may organize a portfolio similarly to how you organize a project, using summary tasks and sub tasks. In the Portfolio views, programs are represented as summary projects and their data is the rollup of all projects listed under the specific program.

Creating a Portfolio Hierarchy

By default, RiskyProject Enterprise will “add” all projects in your database to the Project Portfolio. All projects will be considered to be part of your portfolio, but will not be organized in a hierarchical structure: Portfolio > Programs > Projects. Your portfolio can be organized to reflect any types of business units, regions, project types etc. If your projects are not organized or you are adding a new project to the database, you will need to organize your Portfolio.

To create a project or program:

1. Click the Projects tab. In the Project Views group, click any project view. In these views, you will be able to see all your projects. In a new database, there will be no projects shown in the views.

2. To begin building the hierarchy and adding projects, first create a project. This will serve as a starting point to begin building the hierarchy. If the project contains any tasks or resources, it will be an actual project. Otherwise it will be a project placeholder. Project placeholders will not have a Gantt bar associated with them in any Project views: Portfolio Gantt, Risked Project, and Project Portfolio views. To add the initial project, click in the top row and type in a descriptive name.

3. To add the project to the program, right-click on the project directly below the Program and choose Indent.

4. To create an empty row, right-click on the Project ID and click on Insert Project.

5. By repeating these steps, you can create a hierarchy which will include multiple programs and projects.

Opening Projects

To open a project:

1. Select the project in one of the Project views.

2. Click the Projects tab, and in the Projects group click Open Project or,
   - Double click on Project ID or
Right click on Project ID and click on **Open Project** on the shortcut menu. The project will open in the **Schedule > Project Views**.

You can open summary projects or subprojects as long as you have permissions to do so. However, if you open a summary project, you cannot add a project schedule or resources. You may only manage risks associated with the summary project.

If you open a placeholder project, it will not have any tasks or resources associated with it. Once you add at least one task, resource or risk, it will become an active project. Each active project is represented by a Gantt bar in the **Portfolio Gantt** view. A project can contain qualitative risks.

### About the Current Project

Once you open a project it becomes the current project, and schedule or risk data that is added, modified or deleted is added at the current project level. The current project is indicated by either a blue bar for project or red bar for summary project at the top of the RiskyProject workspace. The current project is indicated with *italics* and an arrow next to the project name as in the below example:

A red asterix symbol indicates that the project is currently being edited.

If the **Current Project** bar is not visible, then you are currently viewing the Portfolio. This is especially important if you are in the **Risks views**, as this would mean you are looking at the Portfolio level risk views.
Refreshing the Hierarchy

The hierarchy will be read from the database each time you open any Project view: Project Gantt, Risked Projects, or Project Portfolio. If another concurrent user has modified the hierarchy while you are in any project view, you may need to refresh the project portfolio.

To refresh the project hierarchy:
1. Click the Projects tab.
2. Click Refresh Portfolio.

Locking and Unlocking Projects

Only one user can open a project at a time. Projects will be locked for all other users if somebody opens a project. Locked projects are indicated by an icon next to the project name. A project will be automatically unlocked when a project is closed.

If a project is locked it can be unlocked by an administrator. As an example, it may be necessary to do so if a user left the project open for a long time period.

To unlock a project or group of projects:
1. Click the Projects tab. In the Project Views group, click any Project view.
2. Select the project you would like to unlock.
3. Right-click on the project ID and from the shortcut menu, click Unlock Project.
Modifying Projects

To modify a project schedule, you must open it. If the project has risks and uncertainties, they will be reflected in the project portfolio as soon the project is saved. In particular, risk scores will be re-calculated and the Project Gantt chart will be updated. Project names and project priorities can be updated without opening the project. You may be required to modify the project start time.

To modify a project start time:
1. Open the project.
2. Click the Schedule tab, and in the Settings and Options group, click Project Settings.
3. Click on the Project Start Time box. A calendar opens.
4. Select the new project start time from the calendar.
5. Click OK. Close the project and the new start time will be reflected in the project hierarchy.

Closing a Project

To close the Current Project:
1. Click on the X on the Current Project bar at the top of RiskyProject workspace,
2. Click the Projects tab and then Close Project, or
3. Right-click on the project ID and from the shortcut menu, click Close Project.

If the project has not been saved, you will be prompted to save changes.

Saving a Project

You can add or save an imported project to the database.

To save a project:
1. In the Projects view, select the project that you want to save or select an empty project row.
2. In the Projects group, click Save or Save As. The Save Project dialog box opens. The Save Project dialog box allows you to insert the project into your portfolio hierarchy at any level.
3. From the hierarchy, select the position where you want to insert or save the project. You can rename the project if required in the **Project Name** box.

4. Click **Save**.

**Creating a New Project without a Placeholder**

If you don’t have a current project opened, you can create one by adding tasks to the **Project View** or resources to the **Resource View**. A new current project will be created automatically and added to the bottom of the hierarchy.

![Image of project hierarchy]

You are also able to rename or save this project to a different position in the project hierarchy.

**Importing a Project File to the Database**

Importing projects allows you to import RiskyProject project files into your database and portfolio. These files are created by RiskyProject when using the standalone desktop mode.

**To import a file:**

1. Click the **Projects** tab. In the **Project Views** group, click any **Project** view.

2. In the **Export/Import** group, click the **Import from File** button. The **Open** dialog box opens.

3. Navigate to the file (*.alm) and click **Open**. RiskyProject will check if the project file has any risks or mitigation plans. If it does the **Insert risks and mitigation plans from file to Risk Register** dialog box opens. This dialog box allows you to add, ignore or match the risks or
plans to existing ones (rename). If you do not want to use this process click Skip. If the project has a schedule you will also be prompted if you would like to run a simulation.

4. Select the hierarchy location where you want to place the project. You can rename the project in the Project Name box.

Importing an XML File

Importing xml files allows you to import supported xml project files (Microsoft Project xml schema) into your database and portfolio. The xml file import procedure is the same as Import a Project File, but as MS Project xml does not support risks and mitigation plans, this step is omitted.

To import an xml file:
1. Click the Projects tab. In the Project Views group, click any Project view.
2. Select the row in which you would like to place the project.
3. In the Export/Import group, click the Import from XML button. The Open dialog box opens.
4. Navigate to the file (*.xml) and click Open.
5. Select the hierarchy location where you want to place the project. You can rename the project if required in the Project Name box.
Creating projects from Microsoft Project

If you are using the RiskyProject Add-in for Microsoft Project and want to move the project data to RiskyProject Enterprise, you will be required to logon to the RiskyProject database in which you want to add the project. You can then add the project to your portfolio. You may rename or save this project to a different place at any point in the project hierarchy.

If your schedule from Microsoft Project is currently in the database, it will remain linked to your Microsoft Project file; therefore, if you make any changes to the schedule in Microsoft Project it will be reflected in the schedule within RiskyProject.

For more information, see Importing a project file to the database and the Using Microsoft Project 2010/2013 Add-In topics in the RiskyProject User Guide.

Exporting a Project

You can export your project files to the RiskyProject file format (*.alm).

To export a project to a file:

1. Click the Projects tab. In the Project Views group, click any Project view.
2. Select the project you want to export to a file.
3. In the Export/Import group, click the Export to File button. The Save As dialog box opens.
4. Navigate to the folder to which you want to save the file.
5. Enter a name in the File Name box and click Save.
Exporting a Project in XML Format

You can export your project files to the Microsoft Project xml file format (*.xml)

**To export a project as xml:**
1. Click the Projects tab. In the Project Views group, click any Portfolio view.
2. Select the project you want to export to a file.
3. In the Export/Import group, click the Export to XML button. The Export Schedule dialog box opens. You can select either the original schedule or results of the Monte Carlo simulation.

4. Select the schedule results option that you would like to export and click OK.

Copying and Pasting a Project

You can copy projects and paste projects in your portfolio.

**To copy a project:**
1. In any Project view, select the project that you want to copy.
2. Right-click and choose Copy from the shortcut.
3. Select a row in your portfolio where you want to place the copied file.
4. Right-click and choose Paste. The copy of the file is placed in the new location.
   - If you select a row with a project in it, the project will be inserted above the selected row. It will not overwrite the existing project.
   - By default, the copy of the project will have the same name. You should rename the copy.

---

You can use Copy and Paste to move projects to a different location in the hierarchy.
Deleting a Project

Deleting a project deletes it from both the hierarchy and the database.

To delete a project:

1. In any Project view, select the project that you want to delete.
2. Right-click and from the shortcut menu choose Delete. The project will be deleted from the database.

- You cannot delete the current project. You must close a project before you can delete it.
- You must have appropriate permissions to be able to delete a project.
About the Project Views

The desktop client for RiskyProject Enterprise comes with 3 additional views:

- Portfolio Gantt
- Risked Projects
- Project Portfolio

About the Portfolio Gantt View

The Portfolio Gantt view is a Gantt chart view of your project portfolio. In the Portfolio Hierarchy you can view your programs and projects. If you have permission, you can also modify the hierarchy by adding, deleting, moving etc. programs or projects.

Double-click on a Gantt bar to view detailed information about a selected project. See Viewing Project Details in the Portfolio Views for more information.

Using Portfolio Gantt view you can visualize:

- Projects with risks and uncertainties alongside original project schedules
- Low and high project durations
- Project performance - tracking bars will be shown
- Low and high project results, which may be shown separately

To view the different settings listed above on the Portfolio Gantt view:

- Right-click on the Gantt chart
- Make a selection from the shortcut menu: show current schedule, show both Low/High Results, etc.
Low and high results are associated with the particular percentile; definition of low and high results can be changed in Portfolio Options (Calculation tab). See About Portfolio Options and Preferences for more information.

About the Risked Projects View

The Risked Project view shows the relative risk associated with a project versus project duration or total project cost. The risk is expressed as:

- project standard deviation of task duration or cost
- maximum or minimum values
- ranges: the difference between maximum and minimum values
- percentiles, or Project Value at Risk (PVatR™).

In a well-balanced portfolio, different projects will have similar levels of risk. However, if the relative risk associated with a project is higher than similar projects, the project should be flagged for additional analysis. Alternatively, if a project has less relative risk, it may represent an opportunity where additional cost or schedule risk could be transferred to it to mitigate projects with higher risk in your portfolio.

Risked Projects view is implemented similarly to Risk Chart view for the project schedule. Risk Chart view shows a bubble chart for the tasks, while Risked Projects view shows a bubble chart for the projects. To read more about how to view and use the Risked Projects view, see Risk Chart in RiskyProject User Guide.

Project Value at Risk (PVatR™) concept was developed by Nicki Kons. See Kons, N. 2016. PVaR - Project Value at Risk. CreateSpace Independent Publishing Platform (April 28, 2016).
About the Project Portfolio View

The Project Portfolio view is a table, which displays the results of a probabilistic analysis of the projects in your portfolio. This view can be used for both analysis and reporting. You can modify the data that appears in this view by adding or hiding columns.

Viewing Project Details in the Portfolio Views

You can view general project information as well as the simulation results for projects.

To view project details:
- Right-click on the Project ID and select Project Details from the shortcut menu.
- Double-click on a project’s Gantt bar on a Project Gantt view, or
- Click the Projects tab and then Main Project Information.

The general project information for the selected project will open.
- Double-clicking on any chart will bring up the detailed view for each chart.
- You may update priorities, project name, description, and other project information here.
About Project Priorities

The Priority field indicates the level of importance given to the project. The project priority is then used in calculating the risk score for the project. Projects with higher priority will be given a higher weighting in calculating the risk impact.

Priority levels range from 0% - 100%. The lowest priority is 0%. The default priority is 100%. Summary projects (programs) don’t have priorities.

Priorities can be changed in any Project view: Portfolio Gantt, Risked Projects, and Project Portfolio. You don’t need to open individual projects to change the project priority. You must have appropriate permissions to change a priority:

- Administrators can change priorities for any project
- Managers can change priorities in projects for which he/she has permission
- Users cannot change priorities

Project priorities are used in the following calculations:

1. Project risk scores for non-schedule risks are multiplied on project priority. Read The Project Risk Score and Project Ranking for more information.

2. Risk impact is multiplied on project priority. Here is an example. The project with project priority 50% has a summary project:

<table>
<thead>
<tr>
<th>Project Name</th>
<th>Priority</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summary Project</td>
<td></td>
</tr>
<tr>
<td>Project #1</td>
<td>50%</td>
</tr>
</tbody>
</table>

Project #1 has a risk assigned to it. For Project #1, the risk register would look like:

<table>
<thead>
<tr>
<th>Risk Name</th>
<th>Probability</th>
<th>Impact</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk 1</td>
<td>50%</td>
<td>80%</td>
<td>40%</td>
</tr>
</tbody>
</table>

A risk register with the same risk for a summary project would look like:

<table>
<thead>
<tr>
<th>Risk Name</th>
<th>Probability</th>
<th>Impact</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Risk 1</td>
<td>50%</td>
<td>40%</td>
<td>20%</td>
</tr>
</tbody>
</table>

The risk impact is multiplied on Project #1 priority = 50% for the summary project only.

To reflect project priority in the risk impacts you should open, recalculate and save the project.
About Project Risk Scores and Rankings

Project risk scores represent the level of risk in the project. The project risk score allows you to compare and rank projects based on their risk exposure. Project risk scores are shown in the Portfolio Gantt and Project Portfolio views.

RiskyProject calculates three risk scores separately:
- For duration
- For cost
- For non-schedule risk categories

How Cost and Schedule Risk Scores Are Calculated

Project duration score is calculated using the following formula:

\[
\text{Risked Duration Score} = \frac{\text{Risked Duration}}{\text{Original Duration}}
\]

Where:
- **Risked Duration** – could be mean project duration as a result of analysis, mean project duration plus a standard deviation of duration, or a certain percentile of the entire project duration.
- **Original Duration** - Original (baseline) project duration with no risks and uncertainties

- If the project does not have duration risks, the Duration score will be equal 1.
- If the Duration risk score is > 1, the project has threats related to duration.
- If the Duration risk score is < 1, the project has opportunities related to duration.

How Non-Schedule and Cost Risk Scores Are Calculated

Risk scores for non-schedule or cost risks are calculated in the following manner:

1. For each project and category there is an array for risk results. For example, if there are two risks “Quality of installation” (probability 50%, impact 30%) and “Quality of manufacturing” (probability 20%, impact 40%), the array for the quality category may look like this:

<table>
<thead>
<tr>
<th>Iteration</th>
<th>Cumulative Impact</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>2</td>
<td>30% + 40% = 70%</td>
</tr>
<tr>
<td>3</td>
<td>30%</td>
</tr>
<tr>
<td>4</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>40%</td>
</tr>
<tr>
<td>6</td>
<td>0</td>
</tr>
</tbody>
</table>
2. The mean of this array is calculated and multiplied by the weight for each non-schedule risk category.

3. The sum of values from Step 2 is calculated for the particular project for all risk categories; this number represents the absolute non-schedule risk score for the particular project.

4. Absolute non-schedule risk scores for all projects are normalized in such a way that:
   - if a project does not have any risks, the score will = 1
   - if a project has opportunities, the score will be < 1
   - if a project has threats, the score will be > 1.

In this way the risk scores for non-schedule risks will be compatible with risk scores for duration and cost.

**Risk Meters**

Project risk score factoring in duration and cost only is displayed using the Risk Meter in Project Summary view and the Project Information dialog (see *Viewing Project Details in the Portfolio Views*).
About Portfolio Options and Preferences

In RiskyProject Enterprise, there are three types of project defaults that can be set:

- **Portfolio Options** are common settings for all projects in the portfolio - these options include units, currencies, defaults calculation parameters, among others. Portfolio settings are applied to each project setting either when the project is created (imported) or each time the project is opened.

- **Project Options** can be adjusted separately for each project; Project Options and Portfolio Options are very similar.

- **Preferences** are specific to each computer and can be set by any user.

To change **Portfolio Options or Preferences**:
1. Click the Projects tab.
2. In the Portfolio Settings group, click Portfolio Options or Preferences.

To change **Project Options**:
1. Open a project.
2. Click the Schedule tab.
3. In the Settings and Options group, click Project Options.
About Portfolio Options

Portfolio options set the defaults that are applied to all new projects in the database and require administrative permissions to configure.

The Portfolio Options dialog box includes seven tabs:

- **General** tab to set up general information regarding the organization and can be used for reporting purposes
- **Duration** tab to define the calculation of task durations
- **Calendar** tab to calculate project schedules
- **Units** tab to define how time units are displayed or input
- **Calculation** tab to set up default calculation parameters
- **Cost** tab to input default cost parameters and calculations
- **Risk** tab to define defaults for the Global and Local risks

To read more about Options and Settings, see Setting up your Projects in the *RiskyProject User Guide*.

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The Portfolio calendar is used to display the Portfolio Gantt chart. The Portfolio Calendar is always the **Standard** calendar.

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How Portfolio Options Are Applied

These are two ways by which portfolio options are applied to a particular project:

- Apply portfolio options to all new or imported projects - the user may change individual project options at any time.
- Use only portfolio options - individual project options cannot be changed.

To change these rules:

1. Click the **Projects** tab.
2. In the **Portfolio Settings** group, click **Project Options**.
3. Click the **General** tab.
4. Select on the rules to apply to the Portfolio.
5. Click **OK**.

Individual Risk Matrixes for Different Projects or Users

By default, there is one global risk matrix for all users or projects. However, you have the option to assign individual risk matrixes for different projects or users. If you assign individual risk matrixes for a particular summary project, these will automatically be propagated to all subprojects. If you assign individual matrixes to the users, these will be assigned to all users within a selected user group in your organizational breakdown structure.
To define individual matrixes for users and projects:
1. Click the **Risks** tab and then click on Format Risk Matrix
2. Click on **Advanced Settings**
3. Select **Risk Matrix Settings**: global, per project or per user

**About Risk Visibility (Approval) Rules**
When a new risk is added to the project, this risk will be visible for the current project, the immediate summary project, all summary projects for the current project, and the entire project portfolio. The visibility rules are defined in the Risk tab of the Portfolio Options dialog.

You may always change risk visibility for a particular risk using the Risk Information dialog box. A manager or administrator can make a risk or group of risks visible by clicking on the risk ID and selecting "Make Visible (Approve)" from the shortcut menu.

Here are examples which demonstrate the ways in which particular risks will be visible for different projects within a project hierarchy, depending on risk visibility rules.

<table>
<thead>
<tr>
<th>Enterprise Level (all projects)</th>
<th>All Summary Projects</th>
</tr>
</thead>
<tbody>
<tr>
<td><img src="image" alt="Enterprise Level Project Tree" /></td>
<td><img src="image" alt="All Summary Projects Tree" /></td>
</tr>
<tr>
<td><strong>Only Immediate Summary Project</strong></td>
<td><strong>Current Project</strong></td>
</tr>
<tr>
<td><img src="image" alt="Only Immediate Summary Project Tree" /></td>
<td><img src="image" alt="Current Project Tree" /></td>
</tr>
</tbody>
</table>

**To Define Risk Visibility Rules:**
1. Click the **Project** tab. In the **Portfolio Settings** group, click **Portfolio Options**.
2. Click the **Risk** tab
3. Click the **Risk Visibility (Approval) Rules**.
4. Select one of the four visibility (approval) rules.
5. Click **OK**.
About Preferences

The Preferences dialog allows individual users to set up preferences for project desktop behavior and appearance, as well as setting up default export and 3rd party settings:

1. Select the project view that will appear whenever RiskyProject is opened from the Default View list. “***LAST VIEW***” will automatically load the RiskyProject session which was opened most recently.

2. Select or clear the Show or hide startup view check boxes to enable or disable the workflow bar, legends and splash screens.

You may define the path for the external applications in the Tools tab. This is useful if you have removed an external application or a new release of the external application is installed and RiskyProject cannot find it in the registry. You can also use the Tool tab to correct a path if you selected the wrong file for external application.

Click on Envision Database Connection Settings to configure integration with the Proteus Envision® database. This can be done the same way as configuration for connecting with RiskyProject database, as outlined in the RiskyProject Enterprise Administrator’s Guide.

To define a path to an external application:

1. Click the Projects tab. In the Settings group, click Preferences

2. Click the Browse button to browse for the application executable and enter in the URL of the application vendor

3. Click OK to save the preferences.
Chapter 3: Managing Enterprise Risks and Incidents
Introduction to Managing Enterprise Risks

The Risk Register and Mitigation/Response Plans in RiskyProject Enterprise behave in a manner similar to the standalone desktop version of RiskyProject. However, there are a number of important differences:

- Each time you add a risk to the Risk Register in RiskyProject Enterprise, it will be instantly saved to the database. You can add risks using the Risk Register view or the Risk tab in Task Information or Resource Information dialog boxes in a project.
- Similarly, if you add mitigation or response plans, these will be instantly saved to the database and shared between different projects.
- You must have permissions to add, modify or delete risks, mitigation, and response plans.
- Once added to the register, you can share risks among different projects based on their portfolio visibility (approval) settings.
- You may choose to assign risks to specific projects, summary projects, or the enterprise level of the project hierarchy.
- You can assign different probabilities and impacts for the same risk to different projects or levels of the hierarchy.
- Risks can be visible (approved) in some projects and hidden (not approved) in others.
- Risk may have documents associated with them - documents can be any files, including files found in Microsoft Word, Microsoft Excel, Microsoft Power Point, JPEG or Bitmap images, PDF files, among others.

This section focuses on features specific to the Risk Register in Enterprise. The RiskyProject User Guide contains more detailed information regarding how to use the Risk Register.
About Risk Visibility and Risk Assignment

Each risk can be visible and assigned to specific projects. Visibility and assignment are not identical:

<table>
<thead>
<tr>
<th>Visibility</th>
<th>Assignment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Visiblity means that a risk can be accessible for the specific project, summary project and at the enterprise level.</td>
<td>Assignment means that a risk may occur (affect) the specific project, summary project or at the enterprise level.</td>
</tr>
<tr>
<td>If a risk is not visible, it cannot be assigned to any project.</td>
<td>The user specifically attaches a risk to a project. Only a visible risk can be assigned.</td>
</tr>
</tbody>
</table>

When you create a new risk, it will inherit the default visibility settings. Default visibility is defined in Portfolio Options. See Risk Visibility (Approval) Rules for more information.

Default visibility can be set for:

- Projects which are currently opened (Current Project)
- Only the Immediate Summary Project
- All Summary projects for this project
- At the Enterprise Level

After a risk is created, you can change the visibility if you have permissions to the projects in which you want to make this risk visible.
Assigning Risks to Projects

Risk must be assigned to a specific project, a summary project, or at the enterprise (upper) level of the project hierarchy.

To assign a risk to a project or program:

1. Open the project to which you want to assign the risk; if you do not open a project or program, the risk will be assigned to the enterprise (upper) level of the project hierarchy.

2. Click the Risks tab and then in the Risk Views group, click Risk Register or Risk Properties.

3. Double-click on a Risk ID to open the Risk Information dialog box.

4. Enter all risk properties including probabilities and impacts; you may define different risk alternatives, risk categories, moment of risk (if a risk is assigned to a task or resource). For more information, please read the RiskyProject User Guide.

5. Click OK.
To view risk register on enterprise level:

If you do not have an open project or program (no blue or red bars), this indicates you are looking at the enterprise risk register:

To view the projects to which a risk is assigned:

When viewing the portfolio or program risk register, the **Risk Assigned To** field displays the projects (or programs) to which a risk is assigned.

In the above example, the Current Project bar is not open, which indicates that the you are looking at the Enterprise level risk register. If the risk is assigned to more than one project, the **Risk Assigned To** will become a drop-down list. Click on the list to view all of the projects to which the risk is assigned.

**Changing Risk Visibility**

After a risk is created, you may change the list of projects within which the risk is visible.

To change risk visibility:

1. Click the **Risks** tab and then in the **Risk Views** group, click **Risk Register** or **Risk Properties**.
2. Double-click on a Risk ID to open the **Risk Information** dialog box.
3. Click the **Properties** tab.
4. Select a visibility level. You may choose to make this risk visible:
• For all projects/all levels of the hierarchy
• Only at the enterprise level of the hierarchy
• For specific projects

5. If you need to make your risk visible for a particular project, click Specific Projects and then the Select Projects button. The Risk Visibility dialog box will open.

6. Select projects in which you would like your project to be visible.

7. Click OK.

Automatically Assign Risks to Upper Levels of the Hierarchy

In the above example, the risk “Issue with the hardware” is visible for Project 7 and for Summary Project 7. Here is an important rule:

If you assign a risk to a low level of the hierarchy, it will be automatically assigned to levels directly above it unless visibility is explicitly limited to the project.

In our previous example, if you assign the risk “Issue with the hardware” to Project 7, it will be automatically assigned to Summary Project 3.

To view the projects or programs to which a risk is assigned:
1. Open a summary project (Summary Project 3 in our example).
2. Click the Risks tab and then in the Risk Views group, click Risk Register or Risk Properties.
3. Double-click on a Risk ID to open the Risk Information dialog box.
4. Click the **Probability and Outcome tab** (if you do not have a project schedule) or **Assign to Tasks or Resources Tab** (if you have a project schedule).

5. You will be able to see the risk, which is automatically assigned to the summary project. Column **From Project** indicates where the risk was assigned originally. The original assignment can be changed here. You would have to go to the sub project (Project 7 in our example) to make any changes to the risk assignment.

The same process of automatic risk assignment also works at the enterprise level. Therefore, if a risk is visible at the enterprise level and you assign it to a particular project, the risk will be automatically assigned to the enterprise level.

You may assign the risk to a summary level, even if it is already assigned to the project level. This is useful in situations where the project level and summary level risk is assigned to different categories. For example, at the project level “Pipeline Crack” is a quality risk, whereas on the portfolio level the same risk can also be defined as a public relations risk.

- When you change the visibility for the risk, it will automatically be assigned to the associated summary project or to the enterprise level.
- You must have appropriate permissions to make a risk visible for a summary project or at the enterprise level. If you do not have these permissions, your risk will not be automatically assigned to the upper level of the hierarchy.
- Automatic risk assignment only goes upward from lower to higher levels of the hierarchy (summary project and enterprise level), but not from summary projects down to sub projects.
- Original risk assignments may have multiple mutually-exclusive alternatives with different probabilities and impacts. These risk assignments may also have a particular distribution of
About Hidden Risks

Risks that are not visible for certain projects will be flagged as hidden for those projects. They will still exist in the risk register, but only administrators, managers and the particular owner/manager of the risks will be able to see them.

To see a hidden risk:
1. Click the Risks tab and then in the Risk Views group, click Risk Register or Risky Properties.
2. From Hierarchy based on drop-down list select Visible/Hidden.
3. You will be able to see all hidden risks for the current project or at the enterprise level, if no projects are opened.
About the Risk Approval Process

Risks entered into the system may need to be approved by a manager before they become visible to other users. The manager or administrator can make risks assigned to specific projects visible in other projects. There are two methods to make projects visible:

1. Using the Risk Information dialog box (see Changing Risk Visibility) - using this method you can only change the visibility for one risk at a time.

2. Using the Make Visible (Approve) command - you can modify the risk visibility for a group of risks.

To make a hidden risk visible:

1. Open the project where you want the risk to be visible. If you don’t open any project, the risks will be visible at the enterprise level.

2. Click the Risks tab and then in the Risk Views group, click Risk Register or Risky Properties.

3. Select a single risk or a group of risks.

4. Right-click on the Risk ID.

5. Click Make Visible (Approve).

You must be an administrator or a manager to make risks visible. Even if you are the manager or owner of a particular risk, you cannot make the risk visible for other levels of the hierarchy.

Deleting Risk Assignments

Risks can be deleted using the same process as in the standalone RiskyProject (see the RiskyProject User Guide for more information). You may:

- select a risk in the risk register and press Delete, or
- select a risk or group of risks, right-click on a risk ID and click Delete Risk.

All risk assignments will also be deleted. If these risks are assigned to the projects you need to open projects individually, recalculate them and save them. This will allow the project risk score and other information related to project uncertainties to be updated.
Calculating Risk Probability and Impacts

Risk probability, impact and scores for all risks associated with a particular project or at the enterprise level are updated each time the risk register is loaded or refreshed:

- When you click the Refresh button
- When you close the current project or load a new project
- When you input a new risk
- When you switch views to Risk Register, Risk Matrix, RiskyProperties, or Risk Details

To update the risk register, Monte Carlo simulations are automatically performed. This is required to statistically calculate the cumulative impact of each risk. Monte Carlo simulations are required because the same risk may be assigned to different projects and within a project’s various tasks and resources. The process of impact calculation is outlined in The Project Risk Score and Project Ranking.

The probability for each risk is based on the maximum probability of all risk assignments.

Locking and Unlocking Risks

Only one user can edit a risk at a time. Risk editing is done in the Risk Information Dialog box. Once a user opens a risk, this risk will be locked for all other users. Locked risks have the icon next to the risk name. The risk will be automatically unlocked once risk editing is complete (once the user closes the Risk Information Dialog box).

If a risk is locked it can be unlocked by an administrator. As an example, it may be necessary for an administrator to intervene if a user has a risk opened for a long time period.

To unlock a project or a group of projects:
1. Click the Risks tab. In the Risks Views group, click Risk Register or Risk Properties view.
2. Select the risk or multiple risks you would like to unlock.
3. Right-click on the project ID and from the shortcut menu, click Unlock Risk.
About Risk Documents

You can add documents related to a risk to the risk register as part of your risk management process. This can be useful in order to add artifacts that were used during risk identification, assessment or other processes that are considered important to managing the current risk, but also for future reviews.

To add a document to a risk:

1. Open the risk register.
2. Open the risk to which you want to add the document.
3. Click the Documents tab.
4. You can manage existing documents using the following buttons:
   - **Extract Document**: Click to extract a copy of a document saved to the database onto a local drive.
   - **Update Document**: Click to update a linked document.
   - **Delete Document**: Click to delete a document from the risk.
Adding a Document to a Risk

To add a document to a risk:

1. Open the Document tab.
2. Click the Add or Link Document button. The Document Description dialog box will open.
3. Type in a document name in the Document Name box.
4. Type in a description of the document in the Document Description box.
5. Select either the Add link or Save document in the database option.

   There are some considerations you should note in regards to these options:
   • If you choose to link a document, this provides a path to the local computer. Therefore, it may not be valid for other system users.
   • If you select Add to database, over time this can potentially impact database size and may lead to decreased performance.
6. Click the Browse button to locate the file.
7. Click OK.
Managing Incidents

Incidents are events that can be recorded, viewed and reported in RiskyProject. In RiskyProject, incidents are managed similarly to risks. RiskyProject has an Incident Register. This register is similar to Risk Register. Each Incident has a list of customizable properties that are a different set than risk properties. Risks and incidents can be linked to each other: one risk may have different incidents, while one incident may have multiple risks. Incidents have customizable impact classifications such as Severe Impact, Moderate Impact, Low Impact. The Incidents feature is only available in RiskyProject Enterprise and requires connection to a database.

These views can be accessed using Incident tabs within the workflow bar or ribbon:

1. **Incidents** in the Incident Register
2. **Incident Statistics** as a chart showing occurrence of incidents over time

Enabling Incident Register

To enable Incidents Tabs in Workflow Bar and Ribbon:

1. On the **Projects** tab, click **Portfolio Options > General** tab.
2. Click **Enable incident tracking and reporting (Incident tab)**.
3. Click **OK**. Incidents are now available.

Incident Classification

You can define incident classifications and how incidents appear on the **Incident Statistics** chart. The order of the bars on the Incident Statistics are associated with particular incident classes (groups). For example, for each time period **Low** (green), **Moderate** (yellow), and **Severe** (Red color) are first, second, and third respectively.

Using **Incident Classification Settings** dialog box you can define:

1. The order using the **Move Up** and **Move Down** buttons.
2. The class name (group).
3. Chart periodicity (monthly, quarterly, yearly, etc.)

To open the Incident Classification Settings in Incidents tab, click **Classification** in the **Settings** group.
About Incident Properties

Similarly, to risks each incident has properties that record information about the incident. You can use incident properties to search and filter the Incident Register. Incident properties can be have the following types:

- String – text information
- Integer number
- Real number
- Resource – can be taken from list of resources
- Date
- Picklist: dropdown list with values

Integer numbers and real numbers have maximum and minimum values.

The list of incident properties supports a hierarchy and organized into groups.

Customizing the default incident properties

To customize the incident properties:

1. Click the Incident tab > Settings group > Default Properties.
2. Select a row under which you want to add a new incident property.
3. Right-click on the row number and choose New Property Item.
4. Type in the name.
5. Select the type and required values (i.e maximum and minimum values).

4. Use the Indent and Outdent arrows to create groups of incident properties.
5. If you have Picklist type incident property double-click on incident property ID; Picklist dialog box will opens where you can enter the list of values.

Default incident properties are saved in the database and can be used for all projects. You may use the Restore Default button to overwrite changes in default incident properties you made with standard set of incident properties.

Incident ID Settings

You can generate Incident IDs automatically. Alternatively, you can enter Incident IDs manually in the same manner as you enter any other incident property. If an Incident ID is generated automatically, you can overwrite it manually. Incident IDs will be incremented each time you enter a new incident.

Incident IDs can include four components:

1. Prefix – any symbols (optional)
2. Number – from 4 to 16 digits (optional)
3. Suffix – any symbols (optional)
4. Date – date format can be defined (optional)
The Incident ID may be not unique if you manually overwrite automatically generated IDs.

**To enable automatic generation of Incident ID and define the format of Incident ID:**

1. Click the Schedule tab. In the Settings group, click Options.
2. Click the Incident tab.
3. Click on Incident ID Format to define rules for Incident ID automatic generation; Incident ID Format dialog box opens.
4. Define the Incident ID prefix and suffix.
5. Define the number of digits for Incident ID generation.
6. Enable / disable dates as part of the Incident ID format and define the date format and position.
7. Define starting number of Incident ID

**Viewing the Incident Register**

The Incident view allows you to:

- View a list of incidents with their properties; you can use different incident hierarchies based on classification, owner, or manager
- Sort and filter the Incident Register by clicking on the icon on the right corner of the column header; to undo filtering click on Show All in left corner of the view.
- Insert or delete columns with incident properties, define headers for any individual column or group of columns;
- Create multiple views or tabs shown at the bottom of the view; each view may have different sets of columns and filters
- Edit incident properties either within a view directly or using Incident Information Dialog (double click on Incident ID)
- Print the Incident Register
- Export to Excel
List of Incidents with their properties
Double-click IDs to edit properties and assign incidents to risk
Select incident hierarchy based on classification, owner, or manager
Sort and filter incidents
Reset Filters
Create multiple views with different sets of columns and filters
List of Incidents with their properties
Viewing the Incident Statistics Chart

The Incident Statistics view is used to show the number of issues raised over time for each particular classification. Each classification can be modified. To edit colors, order, number of periods, and periodicity (yearly, monthly, etc) use the Incident -> Classification dialog box.
Editing Incident Information

To edit incident information:

In Incident view or Incident Statistics view double click on incident ID. The Incident Information dialog box will open.

Incident Information Dialog box includes the following tab:

- **General Tab**: allows you to edit Incident Name, Incident ID, Date and Time of Incident, Incident description, Incident follow up actions.
- **Custom Properties**: allows you to edit all individual custom properties.
- **Associated Risks**: allows you to assign risks to the incident.

You can assign incidents to risks in the Incidents tab of the Risk Information dialog box. When in the Risk Register you can double-click on a risk ID and go to Incident tab.
Chapter 4: User Management and
RiskyProject Configuration
About User Management

In RiskyProject Enterprise, user management is based on users, roles and permissions. Each individual who accesses the system should be assigned user logon credentials which are defined in the User Administration panel. Users can be assigned one of three roles: Administrator, Manager or User. The RiskyProject Enterprise Administrator’s Guide describes the user management process. This section describes only how the user can define personal information.

About Roles

RiskyProject Enterprise has 3 defined roles that can be assigned to users: Administrator, Manager and User.

- **Administrator**: the administrator has full access to RiskyProject functions.
- **Manager**: the manager may have full access to RiskyProject, except for the ability to manage users and change user permissions. The manager’s permissions can be limited by the administrator.
- **User**: the users cannot edit managers, users, modify portfolio settings, or delete projects. In addition, the administrator can limit a user’s permissions.

Only administrators can edit user information. A user can only edit their own information, including passwords. The administrator cannot set or modify user passwords. Only administrators and managers can change risk visibility information.

Updating Personal Information

To update personal information:
1. From the File menu, click Users. The User Management panel will open.
2. Review your permissions - permissions cannot be changed by users.
3. Update your personal information.
4. Click OK.

About Permissions

Each user has different permissions:

- Create, modify and delete risks
- Create, modify and delete mitigation and response plans
- Create projects

By default, the Administrator role has all available permissions. Only administrators can change permissions for users and managers. For more information about how to change user permissions, please read the RiskyProject Enterprise Administrator’s Guide. All administrators, managers and users can view all projects and all visible risks. However, if a user does not have permission to modify a risk or a mitigation/response plan, the Risk Information or Mitigation Plans will be read-only. If a user attempts to open the project to which they do not have permission, they will be prompted that they do not have permission to perform this action.
You can always create risks in projects to which you have permission. However, you need permissions to create risks at the enterprise level.

Both managers and administrators can approve (make visible) risks at each level of the project hierarchy.

A user can always modify risks as soon as he or she is listed as an owner or a manager for this risk.

A user or manager must have permissions for all projects (the entire portfolio) to be able to create risks at the enterprise level.

If you use the RiskyProject add-in in Microsoft Project and the project does not exist in the RiskyProject database, it will automatically be created in RiskyProject regardless of user permissions.
Notification Manager

In RiskyProject, you can configure emails which will be sent to users to notify them regarding the status of risks, changes in their properties and upcoming risk reviews. Who needs to receive messages, what those messages are and when they will be sent are all fully configurable by administrators.

RiskyProject can be executed using Windows Task Scheduler every 5 – 15 minutes without preventing user interface and can send out notification e-mails. Notifications can be configured using Notification Manager. Notification Manager is accessible from Tools -> Notification Manager or from File -> Users -> Users Tab -> Notification Manager. After notifications are configured, RiskyProject can read data from notification messages in the RiskyProject database and send them.

To execute RiskyProject using Windows Task Scheduler to send notification messages, it is recommended to install RiskyProject Professional, Lite, or Risk Register on the server. This installation can be done exactly the same way as on a client's computer. A dedicated user can be created to execute RiskyProject for notification messages. The user name and password for RiskyProject installed on the server will be encrypted and saved in the registry. When RiskyProject is executed by the Task Scheduler, no interface will be prevented and user name and password will not be asked. For more information about how to configure a Windows Task Scheduler, please read the RiskyProject Enterprise Administrator’s Guide.

Configuring Notification Messages

To start Notification Manager:
1. Go to Tools
2. Click on Notification Manager
Or
1. Go to File
2. Click on Users - the User dialog will come up
3. Go to Users Tab
4. Click on **Notification Manager**

The Notification Messages tab allows you to configure individual messages. Double-click message ID to enter text for the message. You can use the buttons Risk, First Name, Last Name to substitute the message text with risk name and name of the message recipient.

![Notification Manager](image)

You can define multiple risk review reminder messages if you want to send reminders at different times, for example, one hour, one day or one week in advance.

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**Viewing Sent Notification E-mails**

You can view all notification event e-mails which have been sent using the **Notification Events** tab of **Notification Manager**. To copy, delete or view details of notification messages:

1. Right click on the message ID
2. Select copy, delete or view details of notification messages from the dropdown menu
3. If you select **View details**, you will be presented with a dialog which will include an error if a message was not sent.

You can click the **Sent** button if you wish to force sending notification messages without waiting for the execution of a scheduled process.

You can also limit the number of records of sent messages stored in the RiskyProject database. Each time the scheduled process to send messages is executed, it will delete the oldest messages.

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**Configuring E-mails**

You can configure how to send notification messages using the **Configure E-mail** tab of **Notification Manager**. This tab consists of two sections:
1. The upper section allows you to configure email server settings. It includes information about your e-mail server, port, encoding, etc. E-mail settings will be saved in the system registry.

2. The lower section allows you to send test e-mails to ensure that settings are correctly configured.