MITRATECH | Governance, Risk & Compliance

Risk Check Score Calculation

OVERVIEW GUIDE

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Risk Checks - Overview

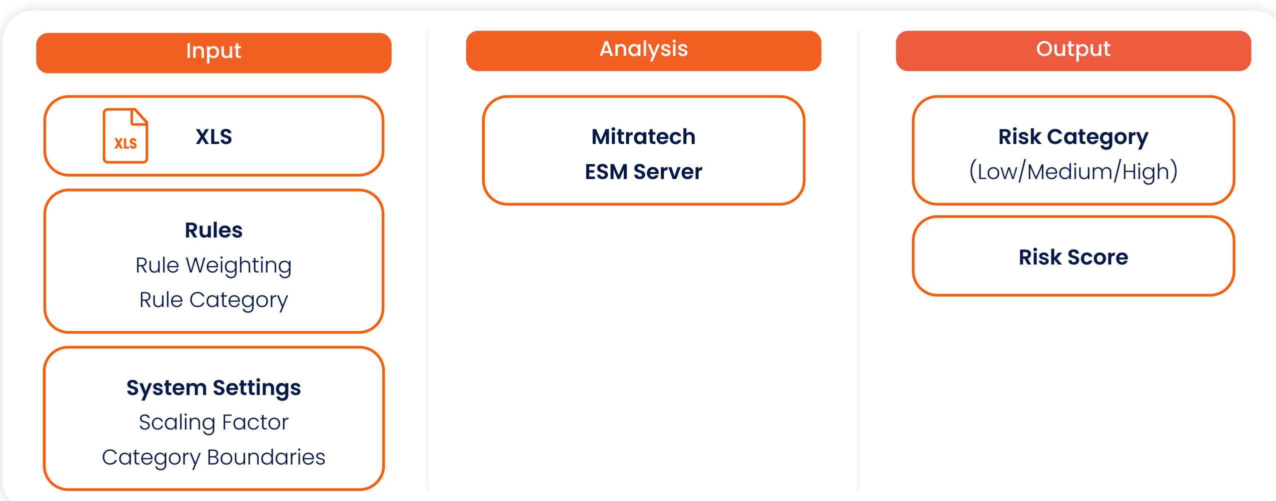
A risk check is a means of assessing a spreadsheet for risk and/or other properties, such as links to a particular data source or use of bad design practice.

A risk check consists of a set of rule which are run against a spreadsheet by the Mitratech's Shadow IT and EUC Management Software. ESM Server, resulting in a calculated risk score and risk category. The risk score can be used to compare spreadsheets against each other and the risk category can be used to classify spreadsheets into three categories: Low, Medium and High.

Many properties of an Excel spreadsheet can be checked as part of a risk check rule, including cell values, cell formulas, cell formatting, VBA macro code, protection, links and named ranges.

Score Calculation - Overview

The diagram below shows an overview of how risk check scores are calculated. In addition to the score and category, Mitratech's Shadow IT and EUC Management Software provides a number of interactive screens and reports to view risk check results and inspect details of why rules have been broken.



The rules and settings listed as inputs in the diagram above can be configured to meet specific needs using the following settings.

Setting	Affect on Score	Where to Configure
Rule Weighting	Increase rule weighting if you want an individual rule to contribute more to the score than other rules.	ESM Management Console - Risk Check Rules Screen
Rule Category	Set rule categories if you want a particular rule to directly affect the output category. For example, you could use this to categorise a spreadsheet as high risk if it had VBA code, regardless of the score that the risk check is given.	ESM Management Console - Risk Check Rules Screen
Scaling Factor	This will increase the score for rules which have few breaks. See Appendix A.	ESM Management Console - Basic Configuration Variables

Score Calculation - Detail

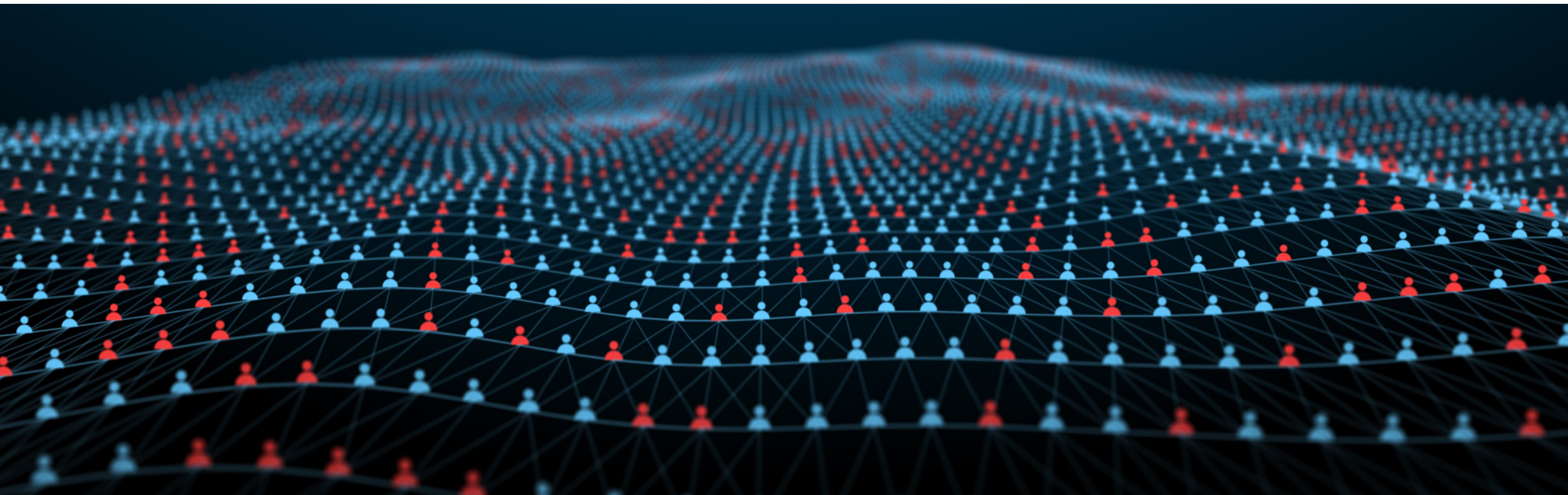
The overall calculation for the score for a risk check is fairly complex. This is because the score has to be flexible enough to take varied rule definitions into account while still providing a meaningful comparison across spreadsheets. The score is calculated as per the diagram below:

To get the **BASE SCORE** for each rule:	Output from each step:
1. Evaluate the expression against each entity (depending on rule type) Cell rules are evaluated against all cells on a worksheet Macro rules are evaluated against all lines of macro code in the workbook Data Connection rules are evaluated against all data connections in the workbook, etc.	Number of entities that break rule
2. Scale the number of breaks by the number of entities checked For a cell rule, divide by the total number of cells on the worksheet. For a named range rule, divide by the total number of named ranges. For a macro rule, divide by the total lines of macro code, etc.	Percentage of entities that break rule
3. Apply the RiskCheckScoreScalingFactor Adjust the percentage of rule breaks according to the scaling factor. See appendix A for details.	Scaled percentage of entities that break rule
4. Apply the rule weighting Use the relative weight of the rule to determine the complete rule score. Rule Score = ScaledBreakPercentage * RuleWeighting * 100 TotalWeightingForAllRules	Individual Rule Score

To get the TOTAL RISK SCORE for the workbook:

1. Add the individual rule scores together

This gives a score out of 100. Note that a score of 100 is highly unlikely.



In addition to the risk check score, a risk check category is also calculated. This is calculated as per the diagram below:

1

Calculate the risk category based on the risk score and the risk category boundaries.

2

Find the highest rule specific category for any broken rules. (If there are any rule specific categories.)

3

Take the highest category from Step 1 and Step 2.

This is the final risk category.

Further Information

If you require further information on Risk Checks in Mitratech's ESM, please view the help guides provided in the ESM applications or contact Mitratech support at support@mitratech.com.

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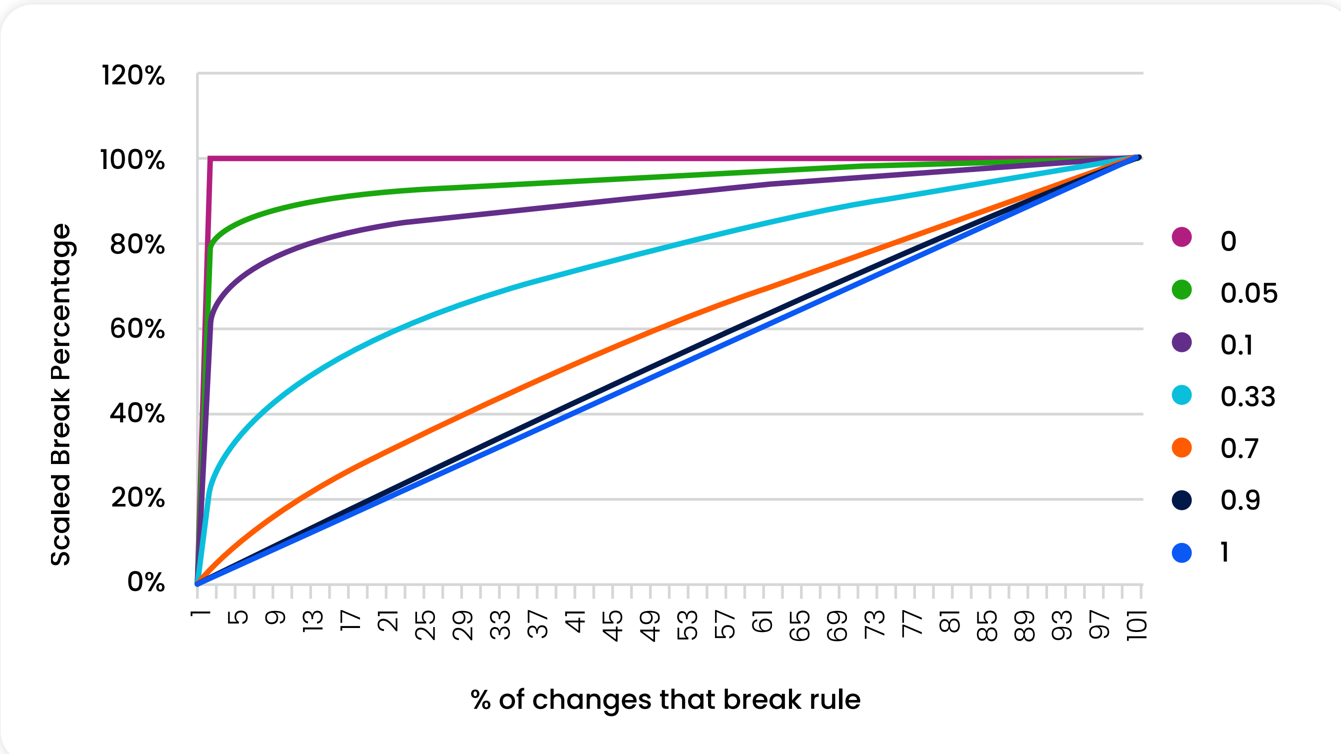
Appendix A - RiskCheckScoreScalingFactor

The scaling factor is a system wide variable that alters the base percentage of entities broken by a rule. It is intended to allow a higher score to be assigned to a rule when there are a large number of entities but only a few of these actually break the rule. It allows a range of exponential transformations so that the first few breaks can contribute to the score much more heavily than the majority of entities which don't break the rule. A chart can be seen below with some example values for the scaling factor:



The default scaling factor is 0.33. You can see that if only 22% of the cells in the workbook break a rule, this will result in approximately 60% of the total possible score for that rule being assigned. If, however, a scaling factor of 0.05 is used, then approximately 93% of the total possible rule score will be assigned. By using a scaling factor of 1, the transformation becomes linear and has no effect. A scaling factor of 0 will mean the rule is assigned its full score if any of the entities in the workbook are evaluated to have broken, regardless of how many there are.

Appendix B - Simplified Example

Assume there are five rules set up:

1. **Cell Rule A,** with **weighting 5, 500** of the **20,000** cells in the workbook break this rule
2. **Cell Rule B,** with **weighting 1, 6,000** of the **20,000** cells in the workbook break this rule
3. **Macro Rule C,** with **weighting 5, 15** of the **500** macro lines in the workbook break this rule
4. **Named Range Rule D,** with **weighting 1, 60** of the **100** named ranges in the workbook break this rule
5. **Workbook Rule E,** with **weighting 8,** the workbook breaks this rule
6. **We will use the default scaling factor of 0.33**

Note that the total weighting is 20, so the maximum score for rule A will be 25, the maximum score for Rule B will be 5, etc.

Using the steps detailed earlier in the document, we get the following values for each rule.:

Rule	Number of Breaks	Total Entities in Workbook	% of Breaks	Scaled Break %	Weighted Score
A	500	20,000	2.5	29.6	7.40
B	6,000	20,000	30	67.2	3.36
C	15	500	3	31.4	7.86
D	60	100	60	84.5	4.22
E	1	1	100	100	40
				TOTAL	**62.8**

As an example we will consider rule A. 500 of the cells in the workbook evaluate to true when the expression is tested against them. There are 20000 cells in the workbook, so the percentage of breaks is 2.5%. After applying the scaling factor (refer to graph in Appendix A), this scaled break percentage is converted to 29.6%. The weighting of this rule is 5, which is 25% of the total weighting. This means that the final score for the rule is 25 * 29.6% = 7.40.

Adding the weighted scores for each rule gives us a total risk score of 62.8.

About Mitratech

Mitratech has a 35-year history as a leader in providing technology and services that empower organizations to manage risks, increase efficiency, control costs, and scale for the future.

The lines continue to blur across Legal & Claims, Risk & Compliance, and Human Resources (HR)— and Mitratech is the trusted partner in driving clarity and collaboration across all these functions with cloud-based, automation-driven solutions.

For risk and compliance professionals, the Mitratech platform makes it easy to begin — or optimize — the digital transformation journey with a foundation of intelligent SaaS workflow automation, purpose-built from the ground up for quick and easy adoption. As the only partner that delivers a full breadth of solutions spanning matter management, spend analytics, eBilling, and legal hold — underpinned by no-code workflow automation and tech-forward contract management — Mitratech remains the undisputed leader in legal tech and preferred partner to the Office of the GC.

Mitratech serves over 14,000 organizations worldwide, spanning more than 160 countries.

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