



Windcave

Risk Management

Version 1.0

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Document Revision Information and Amendments

All amendments are to be identified and the manual updated, noting the amendment on this amendment page.

Version	Date	Section	Revision Information	Amended by
0.1			Initial version	
0.2			Added Risk Scoring and Risk Assessed Transactions	
0.3			Formatting updates and screenshots	
0.4			Updates to terminology and improvements to screenshots	
0.5			Formatting updates add info on allowed/blocked lists for specific cards	
0.6			Updates to Risk Scoring, available BIN range profiles, and Risk Assessed Transactions	
1.0	2019/10/30	All	Rebranded whole document	LF

Related Documents

Document Title	Link/Location

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1 Overview

Windcave offers an extensive library of customizable Risk Management rules which are used to enforce security, prevent fraudulent activity, and provide in-depth knowledge of card-holder behavior to the merchant.

Prior to validation by the acquiring bank, the Risk Management rule sets are used to vet the transaction inputs, analyze metadata, and assess the risk associated with any given transaction based on the recorded transaction velocity of a given card.

Merchants using the Windcave Risk Management rule sets are able to reduce their exposure to potentially fraudulent behavior. Static allow and block lists, the ability to block or allow specific cards, and real-time transaction notification and monitoring allow merchants to put in place rules which bolster their security without alienating genuine customers. Merchants are encouraged to set rules which work for them and their business model.

Merchants with an effective array of Risk Management rules would expect to see a reduction in exposure to financial risk. By identifying suspicious purchases in advance, the merchant can make an informed choice on whether to provide goods and services. Reduced charge-backs and better control over stock will allow for merchants to reduce financial costs associated with credit/debit card fraud.

The Windcave Risk Management rules give merchants the option of receiving real-time notification for all transactions. Real-time notification provides merchants with the ability to review transactions, learn about card-holder behavior, and most importantly learn how to set effective risk-management rules.

Risk Management rules are accessible for review and customization via Payline.

Production - <https://sec.windcave.com/pxmi3/logon>

Testing - <https://uat.windcave.com/pxmi3/logon>

For additional information regarding the Risk Management rule sets and how these can benefit your business, please contact our sales team:

Phone: 0800 PAYMENT (729 6368)

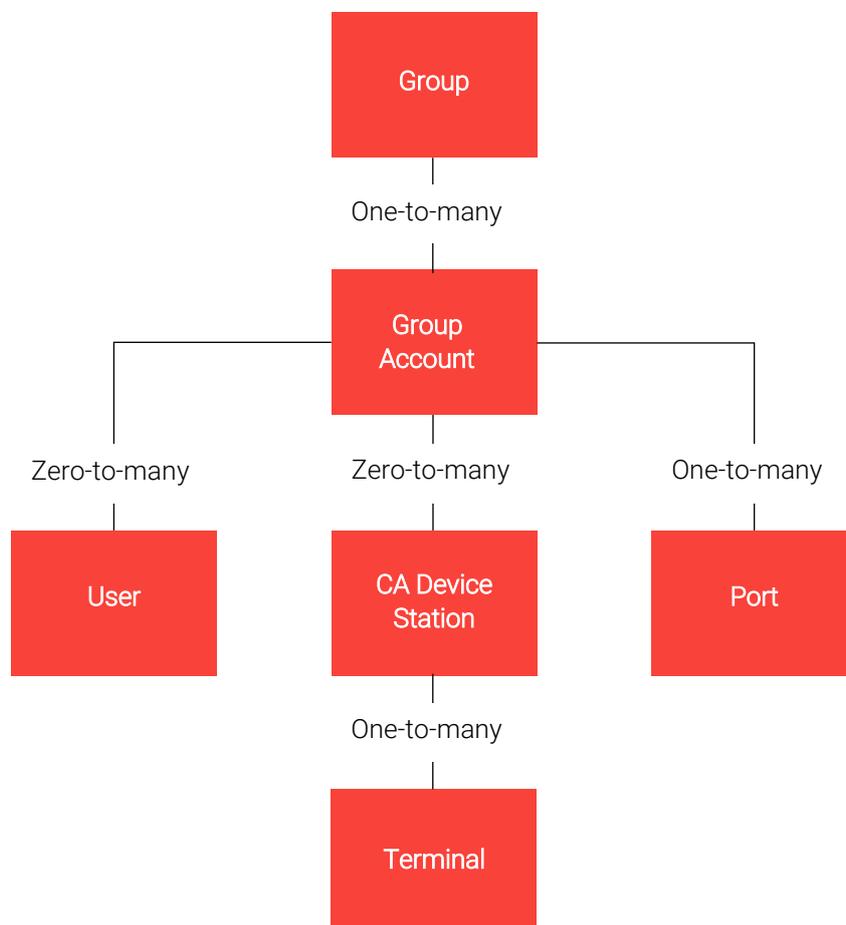
Email: sales@windcave.com

2 Your Setup

For every customer, an account is set up to hold all of their custom settings, transactional information, and contact details.

At the highest level of abstraction, a Group contains important technical information about a customer. Each Group contains a number of general purpose settings which are applied across the board to each and every element of the customer's Windcave experience.

Each Group has one or more Group Accounts associated with it, whereas a Group Account contains a reference to one and only one Group. Group Accounts are used to differentiate between elements of the merchant's payment facilities. Most Groups will have only one Group Account, however in some cases (for example a large business or franchise) it is necessary to further split the information in order to assess where transactions are occurring



Each Group and Group Account are linked to one or more Ports, and each Port applies to only one Group and Group Account. The Port controls the link between Windcave and the bank.

All e-commerce payments and Host Initiated Transactions utilize a Windcave User. Each User relates to only one Group and Group Account, however there are no limits on the number of users that can be set up with the same Group and Group Account. For card-

present transactions (both attended and unattended) a CA Device station serves to control the settings of a specific terminal or group of terminals, like the User, each CA Device station has a zero-to-many relationship to the Group and Group Account.

When transacting with e-commerce of HIT, the main Windcave tool you will be using is your User. When transacting in a card-present environment (not including HIT) the main tool is the CA Device Station

3 Use Cases and Rule Exceptions

Windcave Risk Management allows for customizable control over transactions. Cards can be explicitly added to allow and block lists, transactions can be restricted by various inputs, and risk management rules can be applied based on previous transaction history over a configurable time period.

When a generic range of transactions have been blocked (see *section 5.0*), there may be cases where cards are used in a non-fraudulent manner, however these cards will still be blocked by the rules.

Instead of disabling the rule and exposing merchants to potential fraudulent behaviour, the cards can be added to an Allowed Cards list (see *section 4.0*). These Allowed Cards will apply to particular groups and allow for merchants to maintain their own security without discriminating against potential customers.

Conversely a merchant may not wish to implement a blanket rule preventing payments from all card holders based on certain criteria. A block list exists which allows for merchants to block specific cards without also blocking all other potential customers.

When a transaction fails due to a Risk Management rule being broken, the **LR ReCo** will be returned.

4 Block or Allow Individual Cards

At the merchant's discretion, individual cards can be blocked or allowed. The use of Blocked and Allowed lists offers merchants a much finer level of control over which potential customers can and cannot make purchases. Instead of creating (or modifying) existing rule sets, Allowed and Blocked lists will look only at individual card numbers and treat these differently from other cards with similar properties e.g. card issuer or issuing country.

In many cases it is easier and safer to simply add a card to either the Blocked list or the Allowed list instead of modifying rules to take into account exceptional cards.

When a potential customer is known to be genuine, despite having a card which is blocked by one or more of the Windcave Risk Management Rules, it is a straight forward process to add their card to an Allowed list; this requires no modification of the existing rule sets which have been put in place. The Allowed List option is ideal when there are very few cards which need to be added; if there is a very frequent need to add new cards and there is a clear pattern that these cards follow, it may be worthwhile reviewing the Risk Management rules and making modifications.

If a specific card is being used in a fraudulent manner, this card can be added to the Blocked list. This requires no updates to existing rule sets and will allow for a card which would otherwise not trigger any of the Risk Management rules to automatically be declined. This option is ideal when the fraudulent card is similar to many other cards which are not being used in a fraudulent manner. If there is an increasing number of cards which have the same properties being added to the Block List, it may be worthwhile reviewing the existing rule sets and blocking these cards using the Risk Management rules.

4.1 Search Allowed or Blocked List Cards



To search for cards which have already been added to the Allowed or Blocked lists, navigate to Payline and select either Allowed Cards or Blocked Cards under Risk Management; if this is not visible please contact your account manager.

These will be displayed on the left hand side of the screen when accessing Payline.

Both Allowed and Blocked card lists will display the following search options, these can be used to refine the results and look for specific cards.

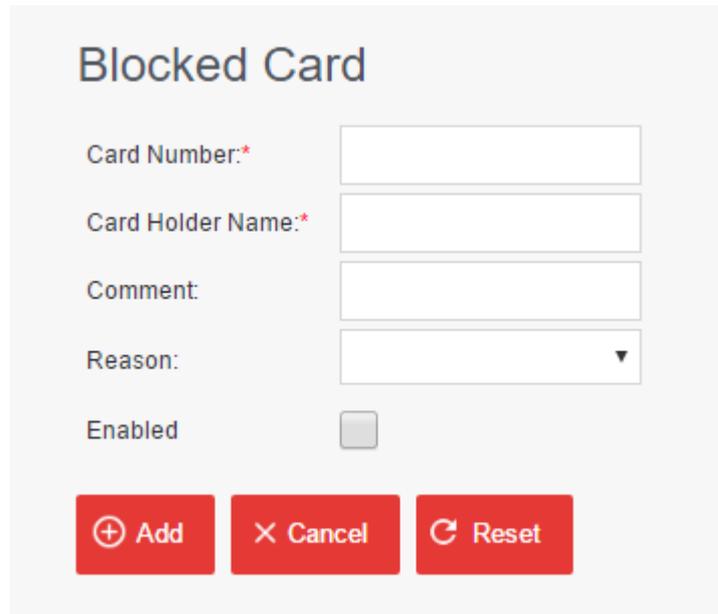
A screenshot of a search form titled 'Allowed Card Search'. The form contains several input fields: 'Card Holder Name', 'Card Number', 'Card Number 6/4', 'Card Number 4', 'Reason' (a dropdown menu), 'Start Date Added (NZT)' (a date picker with fields for day, month, year, and time), and 'End Date Added (NZT)' (a date picker with fields for day, month, year, and time). At the bottom left is a red 'Search' button with a magnifying glass icon, and at the bottom right is a red 'Clear Filters' button with an 'X' icon.

4.2 Add a new Card to the Blocked List

To add a new card to the Blocked List, sign into the Windcave Payline service and navigate to Blocked Cards under Risk Management. Clicking the add button will open the following screen where cards can be added to the Blocked list. Identifying information about the card is required.

Comments can be added in a free text field, this can be used to give an explanation of why the card has been blocked in addition to the Risk Management reason. The reason is selected from a drop down of existing options, additional options can be added using the RM Reasons screen.

The Enabled radio button allows for the merchant to treat the card as though it was not in the Allowed list without completely deleting it. This radio button allows merchants to enable or disable individual cards within the list.



Blocked Card

Card Number:*

Card Holder Name:*

Comment:

Reason:

Enabled

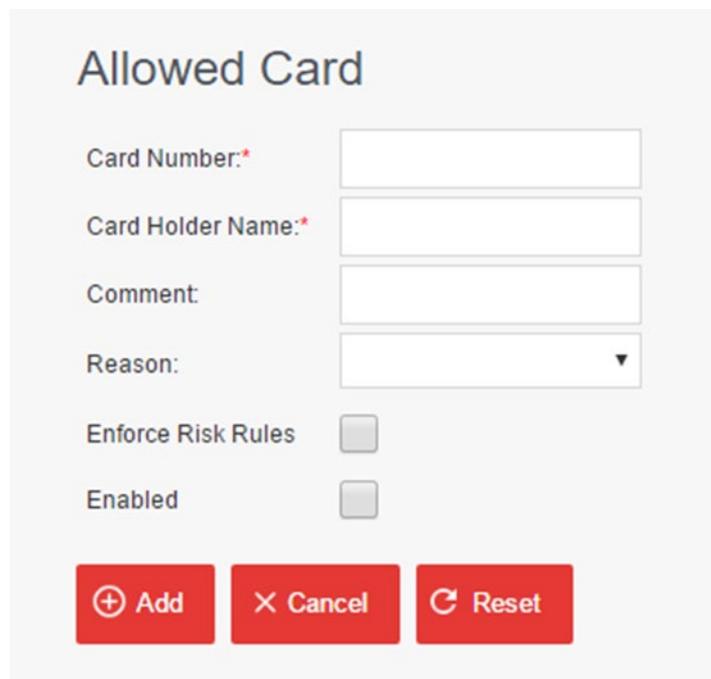
+ Add **X Cancel** **Reset**

4.3 Add a new Card to the Allowed list

To add a new card to the Allowed List, sign into the Windcave Payline service and navigate to Allowed Cards under Risk Management. Clicking the add button will open the following screen where cards can be added to the Allowed list. Identifying information about the card is required.

The Enforce Risk Rules radio button enables merchants to choose whether or not to apply Risk Management rules to this card. If this option is enabled, the card will be treated as though it was any other valid card and will be subject to additional checks which will analyze the transaction history of the card. If this option is not checked any valid transaction will be approved.

The Enabled radio button allows for the merchant to treat the card as though it was not in the Allowed list without completely deleting it. This radio button allows merchants to enable or disable individual cards within the list.



Allowed Card

Card Number:*

Card Holder Name:*

Comment:

Reason:

Enforce Risk Rules

Enabled

+ Add **X Cancel** **Reset**

5 Static Blocked and Allowed lists

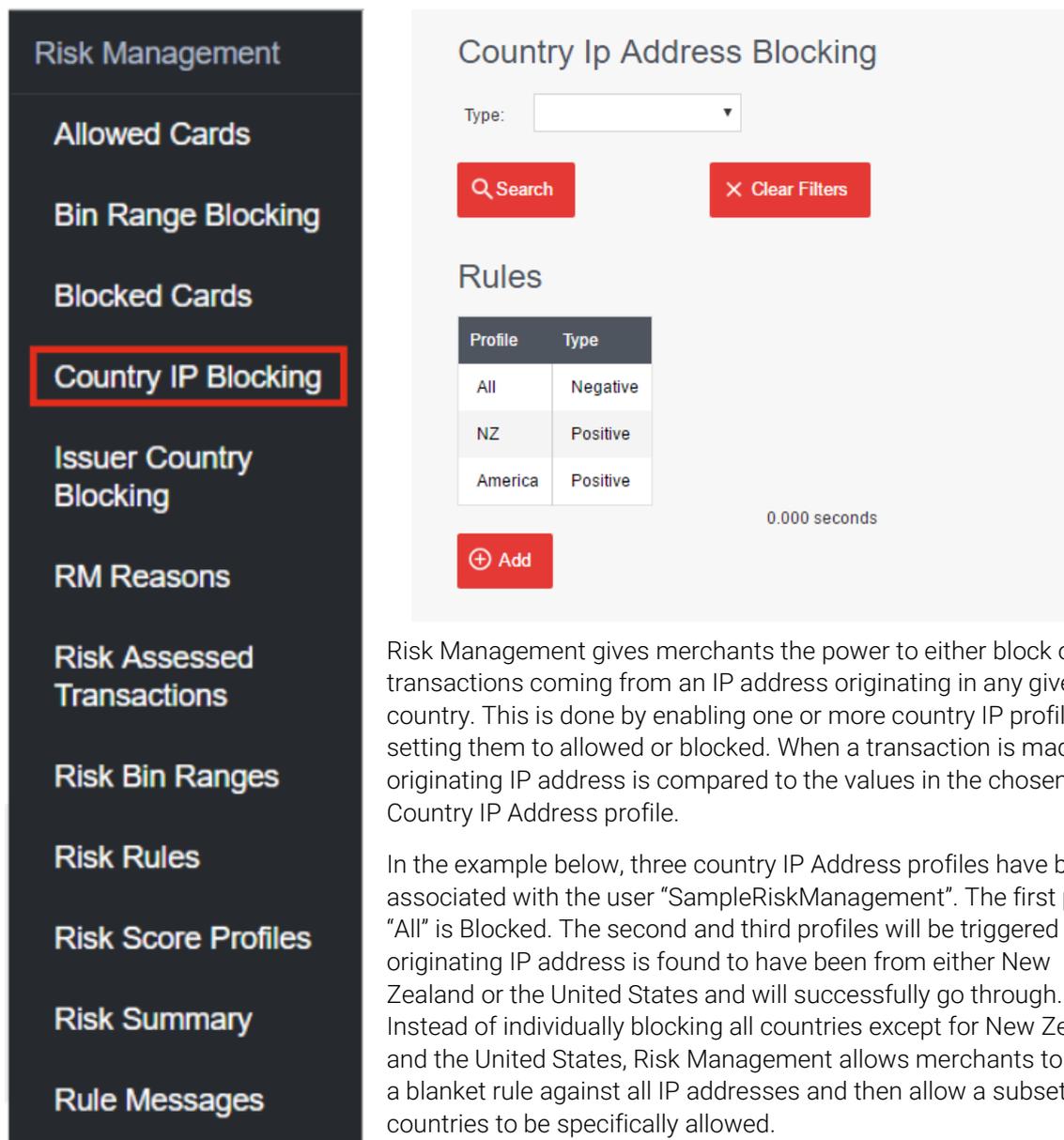
The Windcave Risk Management rule sets incorporate static allow lists and block lists. When a transaction is made, the Risk Management software will analyze the transaction details and either block or allow the transaction based on these static lists.

Any allow listed value will take precedence over a block listed value, this allows a large range of values to be blocked and a subset to be allowed. A wide range of cards can be blocked and then another range of cards can be allowed. The allowed cards will always take precedence over blocked ones.

These lists act as blanket rules which are used to limit transactions based on any of the following factors:

5.1 Blocking Countries by IP Address

Country IP Address Blocking can be found by navigating to the Risk Management drop down in Payline and selecting Country IP Blocking:



The screenshot displays the 'Country IP Address Blocking' configuration page. On the left, a dark sidebar contains a list of menu items: Risk Management, Allowed Cards, Bin Range Blocking, Blocked Cards, Country IP Blocking (highlighted with a red box), Issuer Country Blocking, RM Reasons, Risk Assessed Transactions, Risk Bin Ranges, Risk Rules, Risk Score Profiles, Risk Summary, and Rule Messages. The main content area is titled 'Country Ip Address Blocking' and includes a 'Type:' dropdown menu, a search bar, and two red buttons: 'Search' and 'Clear Filters'. Below this is a 'Rules' section with a table:

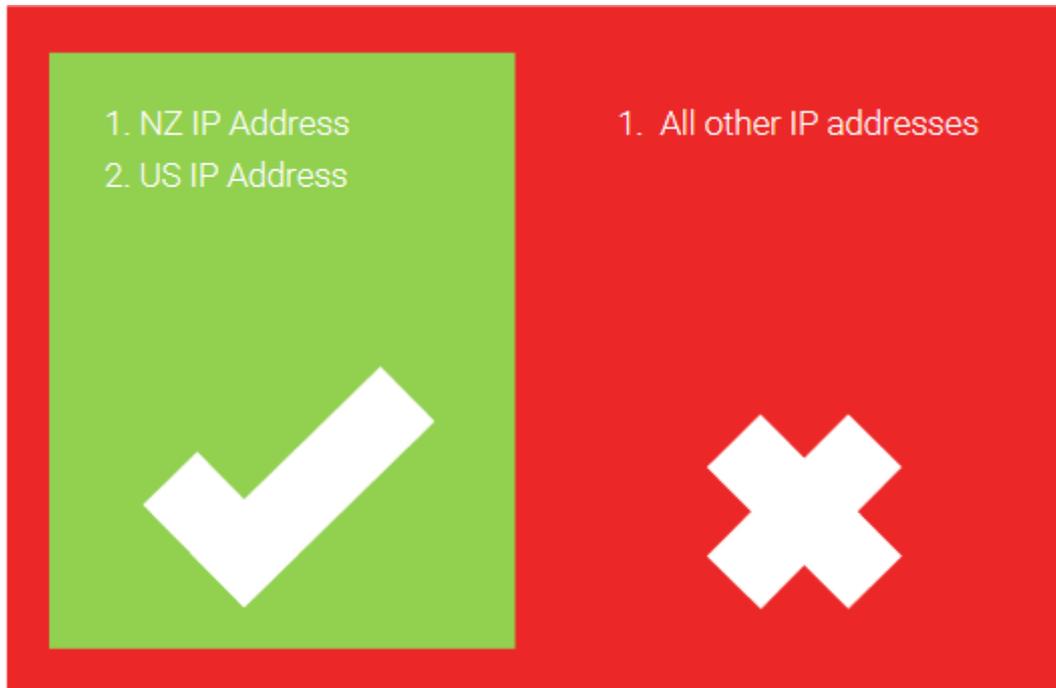
Profile	Type
All	Negative
NZ	Positive
America	Positive

At the bottom of the rules section, there is a red button with a plus sign and the text 'Add', and a timer showing '0.000 seconds'.

Risk Management gives merchants the power to either block or allow transactions coming from an IP address originating in any given country. This is done by enabling one or more country IP profiles and setting them to allowed or blocked. When a transaction is made, the originating IP address is compared to the values in the chosen Country IP Address profile.

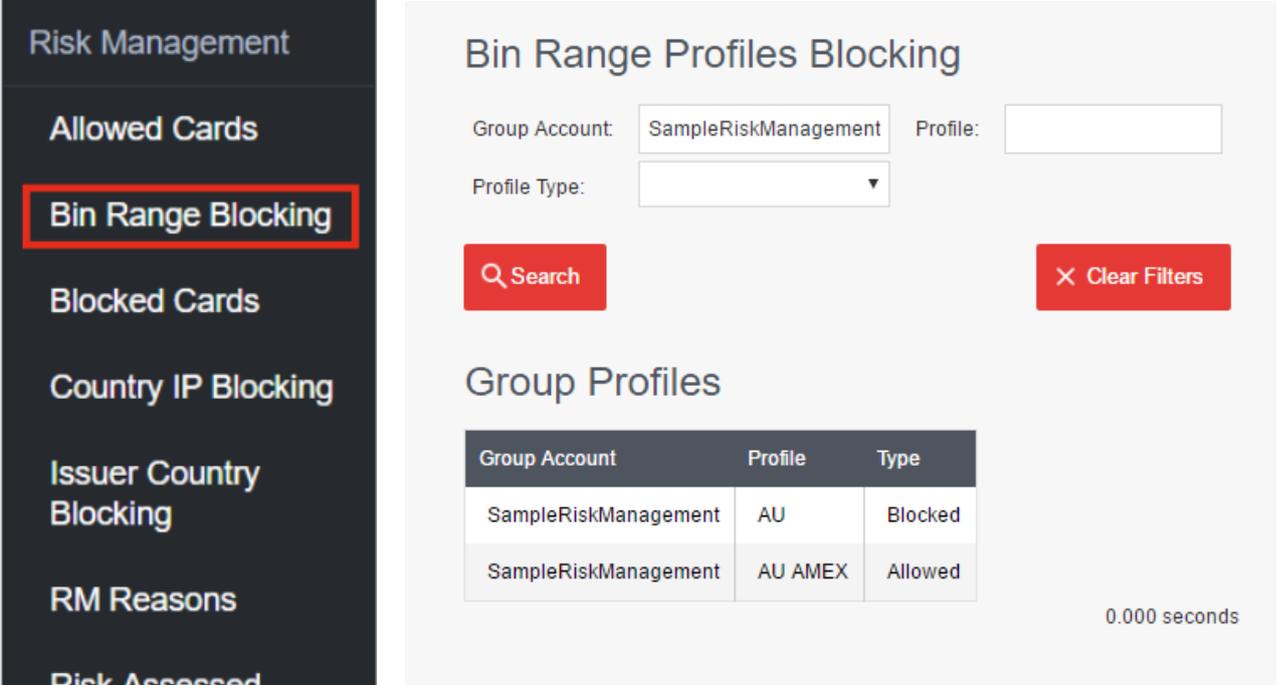
In the example below, three country IP Address profiles have been associated with the user "SampleRiskManagement". The first profile "All" is Blocked. The second and third profiles will be triggered if the originating IP address is found to have been from either New Zealand or the United States and will successfully go through. Instead of individually blocking all countries except for New Zealand and the United States, Risk Management allows merchants to apply a blanket rule against all IP addresses and then allow a subset of countries to be specifically allowed.

In the example above, three country IP Address profiles have been enabled. The first profile "All" is Blocked. The second and third profiles will be triggered if the originating IP address is found to have been from either New Zealand or the United States and will successfully go through. Instead of individually blocking all countries except for New Zealand and the United States, Risk Management allows merchants to apply a blanket rule against all IP addresses and then allow a subset of countries to be specifically allowed.



5.2 Blocking Bin Ranges

Bin Range Profiles Blocking can be found by navigating to the Risk Management drop down in pxmi3 and selecting Bin Range Blocking:



The screenshot displays the 'Bin Range Profiles Blocking' interface. On the left, a dark sidebar contains a menu with 'Bin Range Blocking' highlighted in red. The main content area features a search form with the following fields:

- Group Account:
- Profile:
- Profile Type:

Below the search form are two red buttons: 'Search' and 'Clear Filters'. The 'Group Profiles' section contains a table with the following data:

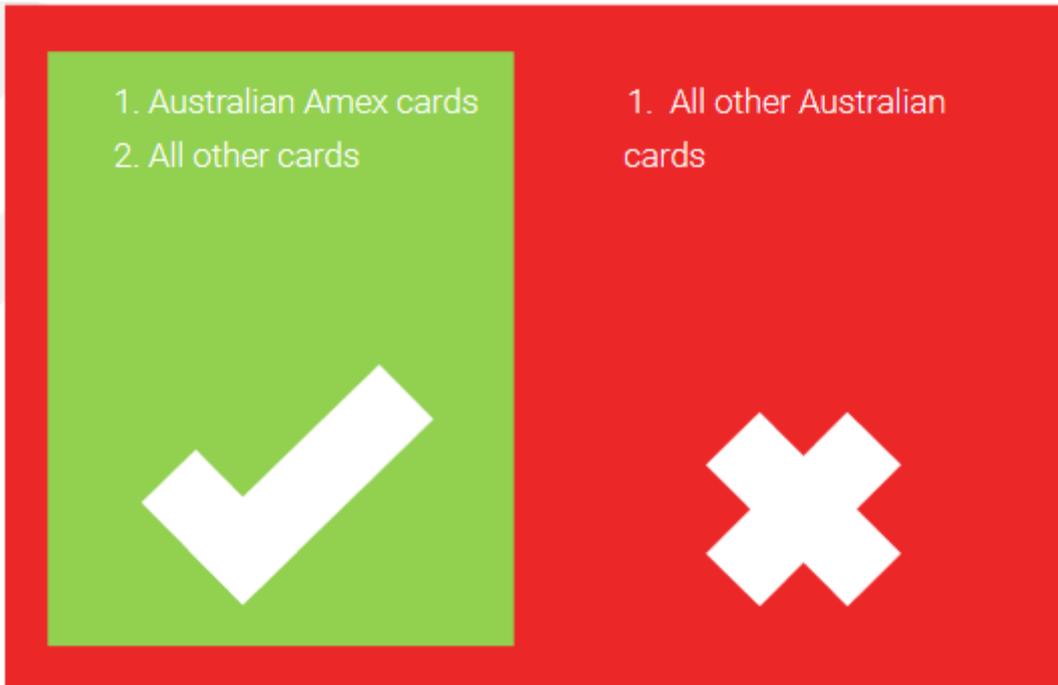
Group Account	Profile	Type
SampleRiskManagement	AU	Blocked
SampleRiskManagement	AU AMEX	Allowed

A timer at the bottom right indicates '0.000 seconds'.

Using Risk Management rules, it is possible to block transactions based on the BIN range of the customer's card. BIN Range blocking will associate the merchant with a BIN range profile and the option to either Block or Allow cards with the given BIN ranges.

Any given BIN range profile is set by Windcave and will contain a list of associated BIN ranges.

In the example below, the BIN range profile "AU" contains the BIN ranges of all cards issued in Australia and another profile called "AU AMEX" which contains the BIN ranges of all Amex cards issued in Australia. The Group Account "SampleRiskManagement" disallows any cards issued within Australia unless those cards happen to be Amex.



5.3 Issuer Country Blocking

Issuer Country Blocking List can be found by navigating to the Risk Management drop down in pxmi3 and selecting Issuer Country Blocking:

> [Issuer Country Blocking](#)

Issuer Country Blocking List

Type:

[Search](#) [Clear Filters](#)

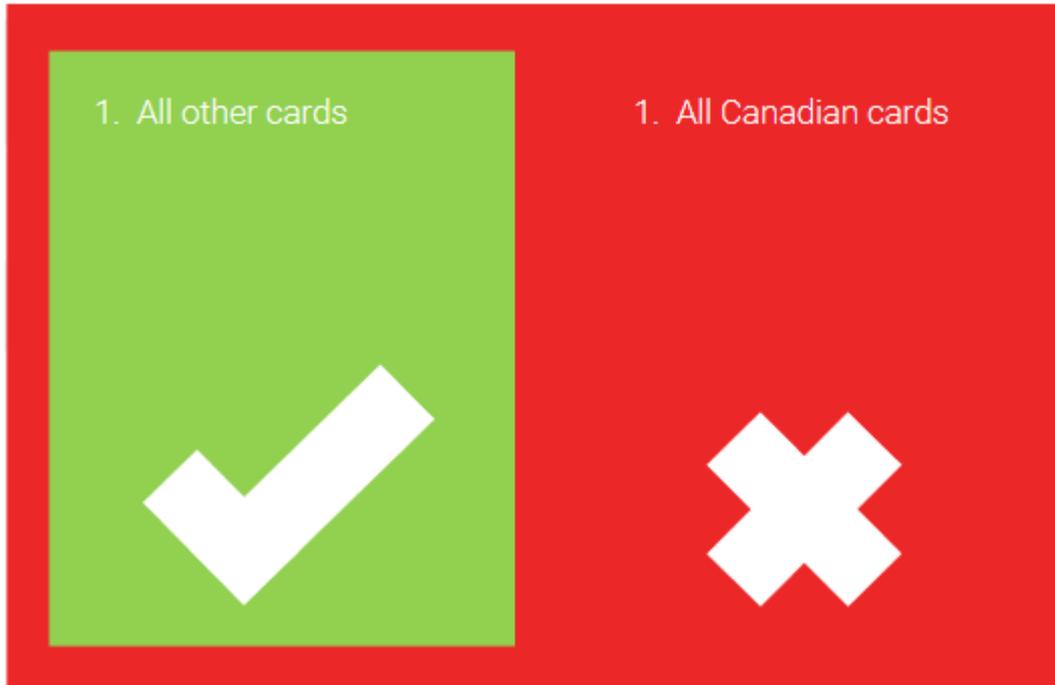
Rules

Profile	Type
Canada	Blocked

0.000 seconds

Similar to the BIN range allow and block lists, Risk Management also provides the more straight-forward option to block cards issued in a particular country. In the above example, all Australian issued cards were blocked using the BIN range profile "AU" an alternative to using BIN range profiles is the Issuer Country Blocking List.

In the example below, all cards issued in Canada will be blocked.



5.4 Example Summary

In the above examples, the transaction's IP address must be from either New Zealand or the United States and any cards issued in either Canada or Australia will be blocked (with the exception of Australian Amex cards).

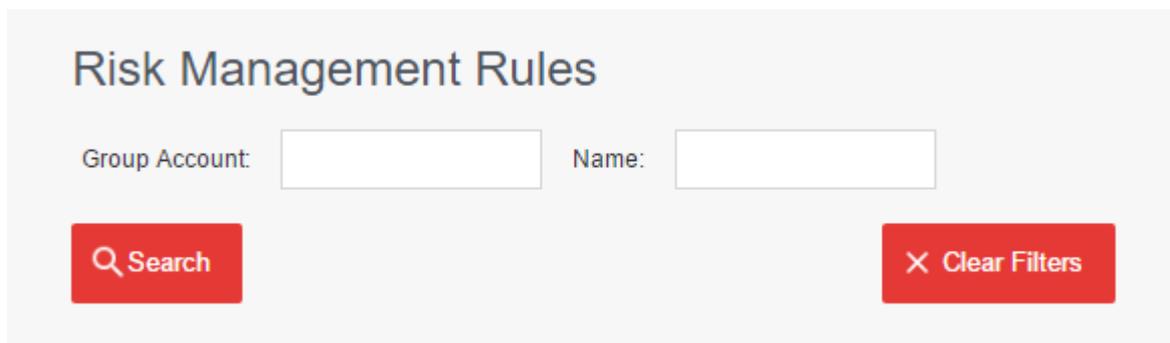
These rules work in conjunction to provide the merchant a set of generalized blanket conditions which restrict where and how transactions are made.

6 Custom Risk Rules

Risk Rules provides merchants with the ability to monitor, enforce, and fine tune highly customizable rule sets. Merchants are able to modify existing rules or request new rules to be implemented by the Windcave support team.

The customer Risk Rules apply a more specific set of conditions to transactions. Transactions can be blocked depending on the card metadata.

It is possible to use custom risk rules to block transactions over a certain financial value.



The screenshot shows a web interface titled "Risk Management Rules". It features two input fields: "Group Account:" and "Name:". Below the "Group Account:" field is a red button with a magnifying glass icon and the text "Search". Below the "Name:" field is a red button with an "X" icon and the text "Clear Filters".

Each rule can be broken down into three key parts:

6.1 Identify your Rules

Every rule is uniquely identified using a name and is associated with a Group Account. This allows the merchant to quickly look up rules based on either of these fields.

Rule

Name:*	SampleRiskManagement	Group Account:	SampleRiskManagement
Card Presence Type:	<input type="text"/>	Bin Range Profile:	<input type="text"/>
Issuer Country Profile:	<input type="text"/>	Enable	<input checked="" type="checkbox"/>
Stand In	<input type="checkbox"/>		
Include Period (Minutes):	<input type="text" value="1440"/>	Include since day of week:	<input type="text" value="Not Set"/>
Include since Day of month:	<input type="text" value="Not Set"/>	Include from month:	<input type="text" value="Current"/>
RuleType:	<input type="text" value="LimitCardSingleAmou"/>		
Include Txns:	<input type="text" value="Approved and Decline"/>		
Limit Amount:	<input type="text" value="1"/> . <input type="text" value="00"/>	Limit Count:	<input type="text" value="1"/>
Action:	<input type="text" value="Decline"/>	Auto Add Card Blocked	<input type="checkbox"/>
Auto Block IP	<input type="checkbox"/>	Block IP Minutes:	<input type="text" value="0"/>
RiskScore:	<input type="text" value="10"/>		
Reason:	<input type="text" value="Invalid card"/>	Message:	<input type="text"/>

Include Transaction Types

Note: Normally for this, a rule would have combo of Auth/Purchase/Void (money coming in) or Refund on its own

Auth	<input checked="" type="checkbox"/>	Purchase	<input checked="" type="checkbox"/>
Void	<input checked="" type="checkbox"/>	Refund	<input type="checkbox"/>
Complete	<input type="checkbox"/>		

6.2 When Does your Rule get Looked at?

Any rule will require conditions upon which it will be looked at by risk management.

The example below explores the various parameters which can be associated with the "SampleRiskManagement" rule.

Rule

Name*	SampleRiskManagement	Group Account	SampleRiskManagement
Card Presence Type:		Bin Range Profile:	
Issuer Country Profile:		Enable	<input checked="" type="checkbox"/>
Stand In	<input type="checkbox"/>		
Include Period (Minutes):	1440	Include since day of week:	Not Set
Include since Day of month:	Not Set	Include from month:	Current
RuleType:	LimitCardSingleAmou		
Include Txns:	Approved and Decline		
Limit Amount:	1 . 00	Limit Count:	1
Action:	Decline	Auto Add Card Blocked	<input type="checkbox"/>
Auto Block IP	<input type="checkbox"/>	Block IP Minutes:	0
RiskScore:	10		
Reason:	Invalid card	Message:	

Include Transaction Types

Note: Normally for this, a rule would have combo of Auth/Purchase/Void (money coming in) or Refund on it's own

Auth	<input checked="" type="checkbox"/>	Purchase	<input checked="" type="checkbox"/>
Void	<input checked="" type="checkbox"/>	Refund	<input type="checkbox"/>
Complete	<input type="checkbox"/>		

Update Delete Cancel Reset

6.3 When Does your Rule get Triggered?

If Risk Management looks at a rule, it will trigger based on how the following fields are set.

Field	Description
Stand In	Parameter used for testing. Should be unchecked by default.
Include Period (Minutes)	These values are used to set the period for rules limiting transactions over a certain time frame.
Include Since Day Of Week	
Include Since Day Of Month	
Include From Month	

Rule

Name:* Group Account:

Card Presence Type: Bin Range Profile:

Issuer Country Profile: Enable

Stand In

Include Period (Minutes): Include since day of week:

Include since Day of month: Include from month:

RuleType:

Include Txns:

Limit Amount: Limit Count:

Action: Auto Add Card Blocked

Auto Block IP Block IP Minutes:

RiskScore:

Reason: Message:

Include Transaction Types

Note: Normally for this, a rule would have combo of Auth/Purchase/Void (money coming in) or Refund on it's own

Auth Purchase

Void Refund

Complete

↻ Update
🗑 Delete
✕ Cancel
↺ Reset

Rule Type	Looks at both the medium used to make a transaction and information about the transaction and/or transaction history. Please see section 4.2.1 for a full set of examples on each rule.
Include Txns	Will apply the rule to Approved and/or Declined transactions only.
Limit Amount	Sets the financial limit on transactions which are restricted by a monetary value.
Limit Count	Sets the numeric limit on transactions which are restricted by a count.

6.3.1 Risk Rules

Each rule can be broken into categories by which parameters it checks and what will cause it to break.

Rule Prefix	Description
LimitAccount	The Account parameter pertains to the optional <AccountInfo> XML tag sent in a transaction.
LimitCard	Refers to the Card Number being transacted against.
LimitPhoneNumber	The Phone Number parameter pertains to the optional <PhoneNumber> XML tag sent in a transaction.
LimitIpAddress	Refers to the originating IP Address the transaction was made from.

Rule Suffix	Description	Example
SingleAmount	Will not allow any transaction with an amount exceeding "Limit Amount"	If Limit Amount is set to \$100, the transaction will always fail for payments exceeding \$100.
TotalAmount	Will not allow transaction/s to be made where the cumulative total exceeds "Limit Amount"	If Limit Amount is set to \$100, it is possible to only send a cumulative total of \$100 in transactions. Any combination from 10,000 payments of \$0.01 through to 1 payment of \$100 would be allowed, but if the total value exceeds \$100, the latest transaction will decline. This will review all transactions over the time period set in the Include Period field.
Txns	Will allow only a certain number of transactions and is limited by "Limit Count"	If Limit Count is set to 10, only 10 transactions can be performed. This is independent of financial value. This will review all transactions over the time period set in the Include Period field.
CountOverAmount	Will only allow a certain number of transactions over a certain amount. Controlled by both "Limit Count" and "Limit Amount"	If Limit Amount is set to \$100 and Limit Count is set to 5, it would be possible to send an unlimited number of transactions not exceeding \$99.99 and only up to 4 transactions exceeding \$100. This will review all transactions over the time period set in the Include Period field.

It is also possible to block transactions based on non-financial parameters.

Rule	Description
LimitAccountsPerCard	Limits the number of unique <AccountInfo> XML tags that can be associated with a given card.
LimitPhoneNumbersPerCard	Limits the number of unique <PhoneNumber> XML tags that can be associated with a given card.
LimitCardCountForAccount	Limits the number of cards that can be associated with any unique <AccountInfo> XML tag.
LimitCardCountForIpAddress	Limits the number of cards that can be associated with any unique IP address.
LimitCardCountForPhoneNumber	Limits the number of cards that can be associated with any unique <PhoneNumber> XML tag.

6.4 What Does your Rule do?

When a rule breaks, there will be some action taken.

The example below looks at the possible consequences of the rule break.

Rule

Name:	<input type="text" value="SampleRiskManagement"/>	Group Account:	<input type="text" value="SampleRiskManagement"/>
Card Presence Type:	<input type="text"/>	Bin Range Profile:	<input type="text"/>
Issuer Country Profile:	<input type="text"/>	Enable:	<input checked="" type="checkbox"/>
Stand In:	<input type="checkbox"/>		
Include Period (Minutes):	<input type="text" value="1440"/>	Include since day of week:	<input type="text" value="Not Set"/>
Include since Day of month:	<input type="text" value="Not Set"/>	Include from month:	<input type="text" value="Current"/>
RuleType:	<input type="text" value="LimitCardSingleAmou"/>		
Include Txns:	<input type="text" value="Approved and Decline"/>		
Limit Amount:	<input type="text" value="1"/> . <input type="text" value="00"/>	Limit Count:	<input type="text" value="1"/>
Action:	<input type="text" value="Decline"/>	Auto Add Card Blocked:	<input type="checkbox"/>
Auto Block IP:	<input type="checkbox"/>	Block IP Minutes:	<input type="text" value="0"/>
RiskScore:	<input type="text" value="10"/>		
Reason:	<input type="text" value="Invalid card"/>	Message:	<input type="text"/>

Include Transaction Types

Note: Normally for this, a rule would have combo of Auth/Purchase/Void (money coming in) or Refund on it's own

Auth	<input checked="" type="checkbox"/>	Purchase	<input checked="" type="checkbox"/>
Void	<input checked="" type="checkbox"/>	Refund	<input type="checkbox"/>
Complete	<input type="checkbox"/>		

Field	Description
Action	Determines whether the transaction will decline or be flagged. If Action is set to Decline, the transaction will return the LR ReCo and will fail prior to validation by the bank. A Declined transaction will also be flagged and provide the merchant with a notification of the failure. Flagged transactions will be invisible to the card holder, the notification will be sent solely to the merchant and there will be no indication of a rule break to the customer.
Auto Add Card Blocked	Allows for the card to be automatically added to the merchant's card block list.
Auto Block IP	Allows for the IP to be automatically added to the merchant's IP Address block list.
Block IP Minutes	Works with Auto Block IP to determine how long the IP should be blocked for.
Risk Score	Used in assessing the riskiness of any given transaction.
Reason	Returns the reason for failure, new reasons can be created in the Risk Management Reasons screen. This is only seen by the merchant. Should contain more in-depth information of the issue.
Message	Returns a failure message, new messages can be created in the Rule Messages screen. This is returned to the customer. Should contain a brief description appropriate to the customer.

7 Risk Management Additional Info

The Windcave Risk Management software provides merchants and customers with additional information if a rule is triggered.

7.1 Risk Management Reasons

Risk Management Reasons are designed for use by the merchant and provide more in depth information on why a rule has been triggered. Risk Management Reasons can be viewed directly by navigating to RM Reasons under Risk Management in Payline.

> RM Reasons

The Risk Management Reason List allows users to search, select, and update existing reasons.

Reason List

Name:

[🔍 Search](#) [✕ Clear Filters](#)

Reasons

Name	Description
Invalid card	Invalid card
NOT ALLOWED	NOT ALLOWED
Sample Risk Management	Sample Risk Management

0.000 seconds

[⊕ Add](#)

7.2 Risk Management Messages

The Risk Management messages are designed to be customer facing and provide further explanation as to why a transaction may have been declined. The Risk Management Messages can be viewed by navigating to Rule Messages under Risk management in Payline.

> [Rule Messages](#)

Rules can be searched for, modified, and updated using the Rule Messages screen

The screenshot shows the 'Messages' interface. At the top, there is a search bar labeled 'Text:'. Below it are two red buttons: 'Search' with a magnifying glass icon and 'Clear Filters' with an 'X' icon. Below these is a table with two columns: 'Text' and 'Description'. The table contains one row with the text 'Sample Risk Management' and an empty description field. Below the table is a red button with a plus sign and the word 'Add'. A loading indicator '0.000 seconds' is visible at the bottom right of the table area.

New messages can be added and can be catered to the merchant's requirements.

The screenshot shows the 'Message' form. It has two columns of input fields. The left column contains: 'Text*' (with a yellow highlight), 'Help Text:', 'Card Holder Description:', 'Merchant Text:', and 'Merchant Help Text:'. The right column contains: 'Description:', 'Card Holder Text:', 'Card Holder Help Text:', and 'Merchant Description:'. At the bottom, there are three red buttons: 'Add' with a plus sign, 'Cancel' with an 'X', and 'Reset' with a circular arrow.

8 Risk Summary

The Windcave Risk Management tool contains an easy access summary screen which allows merchants to quickly review and access their Risk Management rules.

Access to the Risk Summary tool is achieved via Payline and navigating to Risk Summary under Risk Management.

> Risk Summary

Risk Management Bin Ranges

Profile	Type
AU	Blocked
AU AMEX	Allowed

0.000 seconds

Blocked Cards

Card Holder	Card Number	Reason
No results found.		

0.000 seconds

Allowed Cards

Card Holder	Card Number	Reason	Rules
SAMPLE	....1111		Override

0.000 seconds

Rules

Enabled	Name	Period	Include Txns	Action	Block On Add	Message	Reason
✓	SampleRiskManagement	1440	Approved and Declined	Flag Event	✗		Invalid card

0.016 seconds

9 Risk Scoring

The Windcave Risk management tool allows merchants to allocate an associated level of risk to a given transaction.

Risk Scoring will associate a level of risk with a transaction and the profile controls what overall score is deemed safe by the merchant.

It is possible to view and amend risk-scoring profiles by navigating to Risk Score Profiles under Risk Management in Payline.

[> Risk Score Profiles](#)

9.1 Risk Scoring Profiles

Each Risk Scoring Profile is associated with a name and the applicable group account, this information is used to identify individual profiles.

The Enable radio button allows the scoring profile to be turned off or on.

Each profile has a score limit, which can be set by the merchant. When a transaction is attempted, the score is calculated; if the score exceeds this limit, the transaction will either be flagged or declined.

Any number of rules can be associated with a given Risk Scoring Profile.

Risk Scoring Profile

Name:*	<input type="text" value="SampleRiskManagement"/>	Group Account:	<input type="text" value="SampleRiskManager"/>
Enable	<input checked="" type="checkbox"/>		
Stand In	<input type="checkbox"/>	Card Presence Type:	<input type="text"/>
Bin Range Profile:	<input type="text"/>	Issuer Country Profile:	<input type="text" value="NZ"/>
Limit Score:	<input type="text" value="5"/>		
Action:	<input type="text" value="Decline"/>	Auto Add Card Blocked	<input type="checkbox"/>
Auto Block IP	<input type="checkbox"/>	Block IP Minutes:	<input type="text" value="0"/>
Reason:	<input type="text"/>	Message:	<input type="text"/>

Include Transaction Types

Note: Normally for this, a rule would have combo of Auth/Purchase/Void (money coming in) or Refund on it's own

Auth	<input checked="" type="checkbox"/>	Purchase	<input checked="" type="checkbox"/>
Void	<input checked="" type="checkbox"/>	Refund	<input type="checkbox"/>
Complete	<input type="checkbox"/>		

<input type="button" value="Update"/>	<input type="button" value="Delete"/>	<input type="button" value="Cancel"/>	<input type="button" value="Copy"/>	<input type="button" value="Reset"/>
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Associated Rules

Risk Rule Name	Risk Score Weight %	Risk Score of Rule	Effective Score (weighted)
SampleRiskManagement	1111	10	111

0.000 seconds

<input type="button" value="+ Add"/>

9.2 Associate a New Risk Scoring Rule

A new rule can be associated with the risk scoring profile and assigned a percentage weight. As the risk score is associated with the rule in the Rules screen (see section 5.4) the weighting allows for this score to be modified and used in more than one Risk Score Profile. This means you can keep the same Risk Score associated with the rule, but modify the weighting depending on the requirements of each profile.

Associated Risk Rule

Rule:* Risk Score Weight %:*

9.3 Update an Existing Risk Scoring Rule

For existing risk rules, it is possible to update the percentage weight and view the associated rule.

Associated Risk Rule

Rule: SampleRiskManagement Risk Score Weight %:*

Risk Score of Rule: 10 Effective Score (weighted): 111

10 Risk Assessed Transactions

Risk Assessed Transactions contains information on every transaction processed. The range of returned transactions is limited by the selected group, group account, the date range, and the degree of risk. Risk Assessed Transactions allows users to see how and why transactions are being flagged and/or declined by providing information on the customer, the card used, and the associated risk.

Search Risk Assessed Transactions

Start Date (NZT): 29 NOV 2016 00 00 End Date (NZT): 01 DEC 2016 00 00
 Severity: No Risk

Search **Clear Filters**

Transaction Results

Authorized	Date	Risk	Risk Score	Possible Score	Card Number	Merchant Reference	Card Holder Name	Username
✓	30/11/2016 15:25:12	0%	0	30	....1111	My Reference	SAMPLE	SampleRiskManagement_PxPay2Dev
✓	30/11/2016 15:24:32	0%	0	30	....1111	My Reference	SAMPLE	SampleRiskManagement_PxPay2Dev
✓	30/11/2016 15:21:08	0%	0	20	....1111	My Reference	SAMPLE	SampleRiskManagement_PxPay2Dev
✓	30/11/2016 15:20:00	0%	0	20	....1111	My Reference	SAMPLE	SampleRiskManagement_PxPay2Dev
✓	30/11/2016 15:12:07	0%	0	20	....1111	My Reference	SAMPLE	SampleRiskManagement_PxPay2Dev
✓	30/11/2016 12:32:06	0%	0	20	....1111	Merchant ref		SampleRiskManagement_PxPay2Dev
✓	30/11/2016 12:31:54	0%	0	20	....1111	Merchant ref		SampleRiskManagement_PxPay2Dev
✓	30/11/2016 12:31:17	0%	0	20	....1111	Merchant ref		SampleRiskManagement_PxPay2Dev
✓	30/11/2016 12:29:58	0%	0	20	....1111	Merchant ref	SAMPLE	SampleRiskManagement_PxPay2Dev

0.000 seconds

Search Risk Assessed Transactions

Start Date (NZT): 29 NOV 2016 00 00 End Date (NZT): 01 DEC 2016 00 00
 Severity: Risk Declined

Search **Clear Filters**

Transaction Results

Authorized	Date	Risk	Risk Score	Possible Score	Card Number	Merchant Reference	Card Holder Name	Username
✗	30/11/2016 15:10:35	N/A	N/A	N/A	....1111	My Reference	SAMPLE	SampleRiskManagement_PxPay2Dev

0.016 seconds

Every transaction entry in the Risk Assessed Transaction Results can be reviewed in detail by directly clicking on the selected result. This screen allows users to modify the level of severity associated with the transaction as well as add notes regarding any changes made. It is also possible to allow or block the card from this screen.

Transaction

DpsTxnRef:	0000000329ec4306	Merchant Reference:	My Reference
ReCo:	LR	Response Text:	DECLINED
Date (NZT):	30/11/2016 15:10:35	Amount:	1.05
Card Number:	....1111	Card Holder Name:	SAMPLE

Options

Notes:

Risk Summary

Risk Percent: N/A

Risk Text:

Manage Associated Card

Reason:

Comment:

11 Risk Notification

Windcave Risk Management provides merchants with the option of receiving notifications when rules are triggered. When rules are broken the payment is either flagged or declined and a notification can be sent out either as an email and/or as an SMS message.

Notifications provide merchants with the opportunity to learn about their card holders and how transactions are made. Receiving notifications when a rule is triggered allows for merchants to stay abreast of their payments and how customers pay for goods and services.

The example below is for a transaction which has been flagged. Information about the transaction as well as the rule which has been triggered is displayed.

Dear Customer,

This payment was APPROVED, however one or more risk rules were triggered which might indicate fraudulent activity. Please review the details below.

Transaction Information

DpsTxnRef	000000032a022aea
Result	APPROVED
Amount	1.05NZD
Time	2016-12-02 15:51:42 NZT
Card Number	.....1111
Card Holder Name	SAMPLE
Merchant Reference	My Reference
TxnData1	Data 1
TxnData2	Data 2
TxnData3	Data 3
IP Address	192.168.102.113

Triggered Rules

Rule Type	Detail
LimitCardSingleAmount	Transaction amount of 1.05 exceeds rule limit of 1.00

In the example below, an SMS alert has been sent to the users phone notifying them of a flagged transaction. The SMS messages are more concise than email notifications and contain only the DpsTxnRef, the financial value of the transaction, the outcome and a date/time string.

