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# Oracle® Adaptive Risk Manager Online Administrator's Guide

Release: 10g (10.1.4.20)

September 2007

**ORACLE®**

Oracle® Adaptive Risk Manager - Online Administrator's Guide, Release: 10g (10.1.4.20)

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## Introduction

Adaptive Risk Manager Online provides sophisticated fraud monitoring, analysis, and tracking by user location, device, time of day, type of transaction, and more—which are evaluated against a set of customizable rules.

Adaptive Risk Manager Online is the administration user interface for Oracle Adaptive Access Manager, used to configure the rules. Oracle Adaptive Access Manager includes the Adaptive Strong Authenticator Knowledge-Based Authentication functionality (KBA) which allows you to configure and implement custom enrollment and challenge procedures within the guidelines of best practices.

This guide is intended for use by rules administrators who configure Oracle Adaptive Access Manager using Adaptive Risk Manager Online. It provides step-by-step instructions for creating and managing groups, creating models that contain rules, customizing and managing rules, and managing the KBA functionality.

Adaptive Risk Manager Online supports multi-tenant deployments. If Adaptive Risk Manager Online is protecting multiple applications, a primary user group will be created for each application.

### Groups

Grouping allows you to view and administer a collection of like items as a single group. To simplify administration, you should assign each group a unique name.

You can create the following types of groups:

- User ID – A User ID group is a collection of User IDs to which you can assign a set of authentication and authorization rules.
- Login ID – A Login ID group is a collection of Login IDs used for Phish Baiting exercises.
- Location – There are a number of group types for location information. Each type of location has its own group type, these include cities, states, countries, IPs, and IP ranges.
- Device – A device group is a group of device IDs.
- Action – An actions group is a set of responses that are triggered by a rule.
- Alerts – An alert group contains graded messages that can be triggered by a rule.
- ASN (Autonomous System Number) - A unique identifier of an autonomous system on the Internet.
- ISP (Internet Service Provider) – An internet connection service business utilized by users hitting the system.
- Top Level Domains (TLD) - Identifies the most general part of the domain name in an Internet address.
- Secondary Level Domains (SLD) - Identifies part of the domain name in an Internet address.
- IP Carriers - Custom IP location data from IP vendor database
- Routing Type - Custom IP location data from IP vendor database
- Connection Type - Custom IP location data from IP vendor database
- Connection Speed - Custom IP location data from IP vendor database
- Generic Strings - List of strings used in rule conditions

- Generic Integers - List of integers used in rule conditions
- Generic Longs - List of longs used in rule conditions

### Models

A model contains configured rule instances (or copies) that, once linked to a group, are used to evaluate activity of group members. The rules are added to the model, configured, and linked to groups by the administrator. New rule instances can be added to an existing model at any time. Model policy types include:

- Security
- Business
- Workflow
- 3<sup>rd</sup> Party

### Rules

A rule identifies and reacts to certain information. Rules can be used for business or security purposes. Rules can be applied to specific groups of users or all users hitting the system.

### Scores & Weights

Score refers to the numeric scoring used to evaluate the risk level associated with a specific situation. Weight refers to the multiplier value used to influence the total score at various evaluation levels.

### Policies

A policy is a collection of models of the same type. The four policy types are:

- Security
- Business
- Workflow
- 3rd party

### Policy Sets

The policy set is the collection of all the currently configured policies used to evaluate traffic in order to identify possible risk.

## Organizing Users, Locations, and Devices into Groups

Adaptive Risk Manager Online enables you to create groups for more efficient administration.

This section describes how to add items to groups individually. Auto-population and bulk uploads directly in the database are also available as part of the custom installation and integration process.

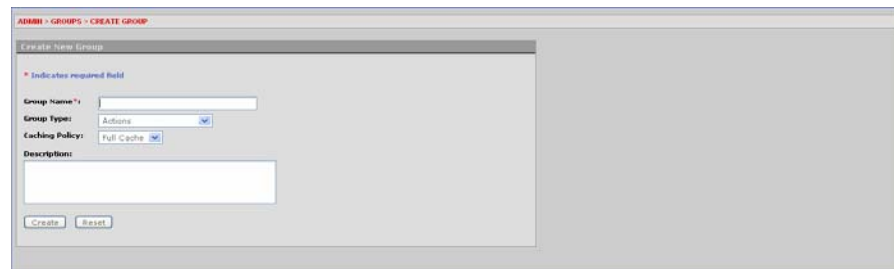
This section describes how to create and edit user ID, location, and device groups. This section includes:

- To create a new group of users
- To create a group of cities
- To create a group of states
- To create a group of countries
- To create a group of IPs
- To create a group of IP ranges
- To create a group of devices

### *To create a new group of user IDs*

1. **On the Admin menu point to Groups, and then click Create Group.**

The Create Group page appears.



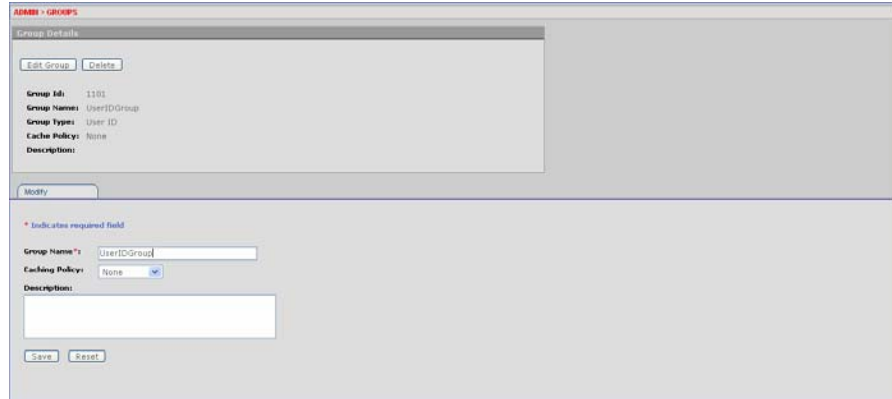
The screenshot shows a web browser window with the title 'ADMIN > GROUPS > CREATE GROUP'. The main content area is titled 'Create New Group' and contains a form with the following elements:

- A red asterisk icon followed by the text 'Indicates required field'.
- A 'Group Name' field with a text input box.
- A 'Group Type' dropdown menu currently showing 'Actions'.
- A 'Caching Policy' dropdown menu currently showing 'Full Cache'.
- A 'Description' field with a large text input box.
- 'Create' and 'Reset' buttons at the bottom of the form.

2. **In the Group Name box, type a unique name for the group.**
3. **Click in the Group Type box and select User ID.**
4. **User groups do not support caching policy so it will be set to None.**
5. **Type any description and notes you want.**
6. **Click Create.**

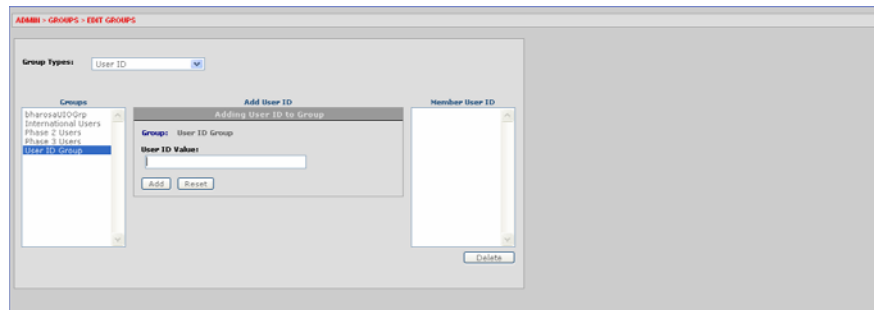
The Group Details page appears.





7. **To change the group's name, type, or notes, see Viewing Details about a Group.**
8. **Click Edit Group.**

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.



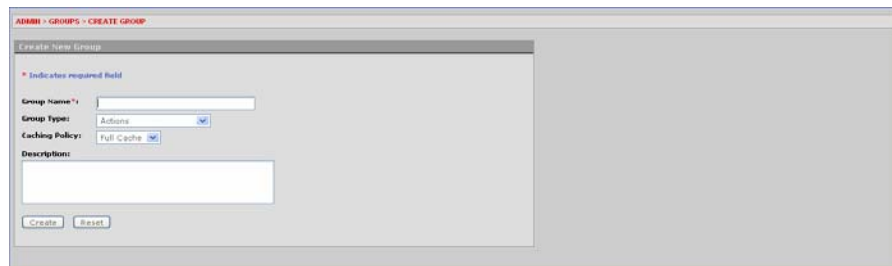
9. **In the User Id box, type the user Id of a user member you want to add to the group, and then click Add.**

The User ID appears in the list of Member Users.

*To create a group of cities*

1. **On the Admin menu point to Groups, and then click Create Group.**

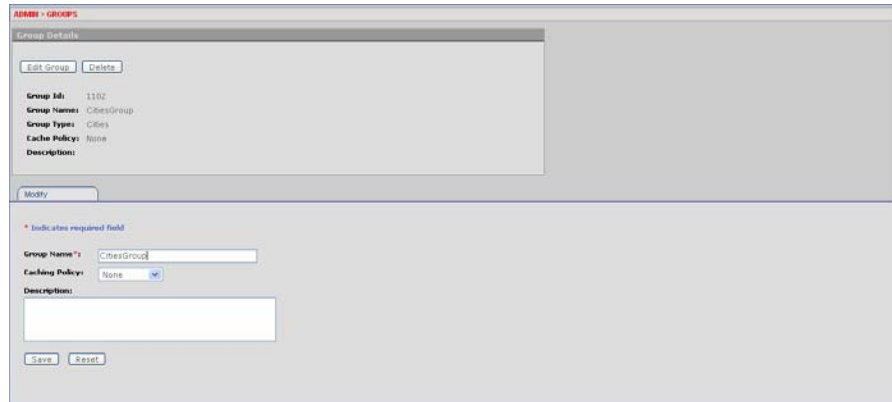
The Create Groups page appears.



2. **In the Group Name box, type a unique name for the group.**
3. **Click in the Group Type box and choose Cities.**
4. **Click in the Caching Policy box and select the caching policy you want.**
5. **Type any description and notes you want.**

**6. Click Create.**

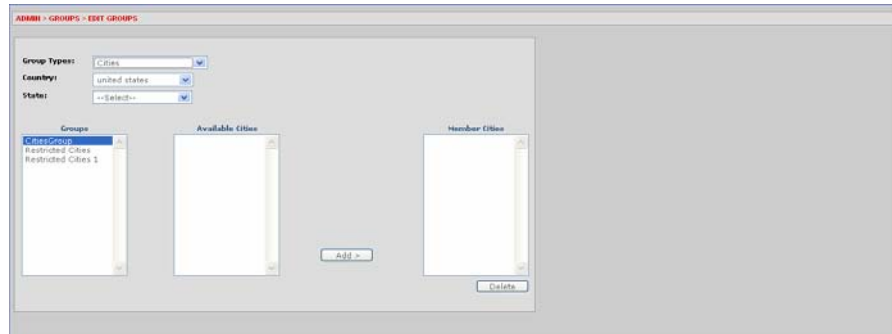
The Group Details page appears.



**7. To change the group's name, type, or notes, see Viewing Details about a Group.**

**8. Click Edit Group.**

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.



**9. Click in the Country box and choose the country you want.**

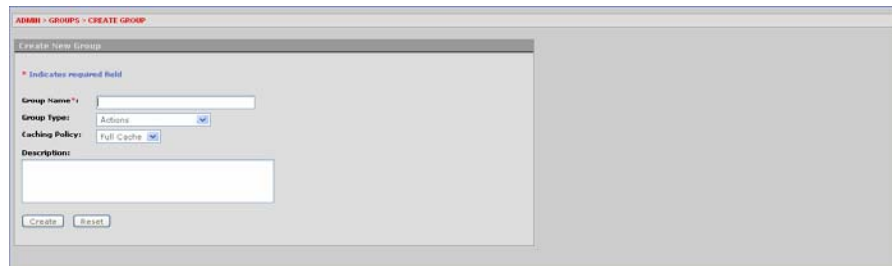
**10. Click in the State box and choose the state you want.**

**11. In the list of Available Cities, click the city you want to add, and then click Add.**

*To create a group of states*

**1. On the Admin menu point to Groups, and then click Create Group.**

The Create Group page appears.



**2. In the Group Name box, type a unique name for the group.**

3. Click in the **Group Type** box and choose **States**.
4. Click in the **Caching Policy** box and select the caching policy you want.  
Generally the full cache setting gives the best performance.
5. Type any description and notes you want.
6. Click **Create**.

The Group Details page appears.

7. To change the group's name, type, or notes, see **Viewing Details about a Group**.
8. Click **Edit Group**.

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.

9. Click in the **Country** box and choose the country you want.
10. In the list of **Available States**, click the state you want to add, and then click **Add**.

*To create a group of countries*

1. On the Admin menu point to **Groups**, and then click **Create Group**.  
The Create Group page appears.

2. In the Group Name box, type a unique name for the group.
3. Click in the Group Type box and choose Countries.
4. Click in the Caching Policy box and select the caching policy you want. Generally the full cache setting gives the best performance.
5. Type any description and notes you want.
6. Click Create.

The Group Details page appears.

7. To change the group's name, type, or notes, see Viewing Details about a Group.
8. Click Edit Group.

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.

9. In the list of Available Countries, click the country you want to add, and then click Add.

*To create a group of IPs*

1. **On the Admin menu point to Groups, and then click Create Group.**

The Create Group page appears.

2. **In the Group Name box, type a unique name for the group.**
3. **Click in the Group Type box and choose IPs.**
4. **Click in the Caching Policy box and select the caching policy you want.**  
Generally the full cache setting gives the best performance.
5. **Type any description and notes you want.**
6. **Click Create.**

The Group Details page appears.

7. **To change the group's name, type, or notes, see Viewing Details about a Group.**
8. **Click Edit Group.**

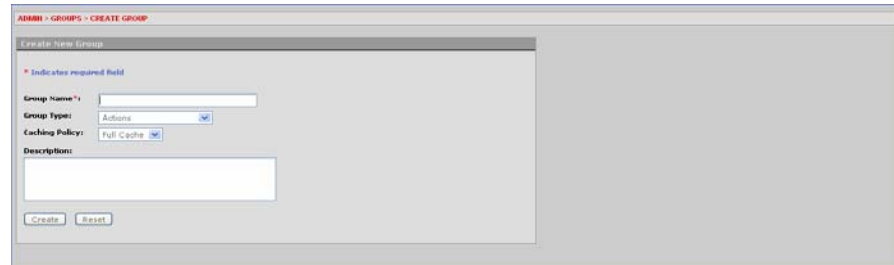
The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.

9. Type the IP address you want to include in the group, and then click Add.

*To create a group of IP ranges*

1. On the Admin menu point to Groups, and then click Create Group.

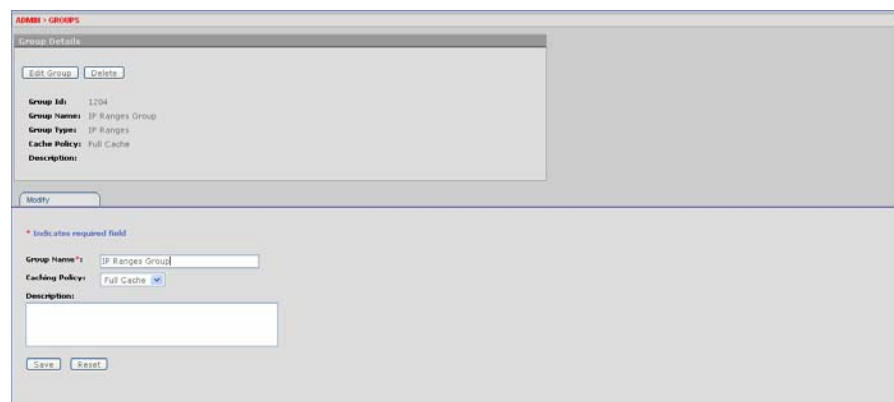
The Create Group page appears.



The screenshot shows the 'Create New Group' form. At the top, it says 'Create New Group'. Below that, there is a red asterisk indicating required fields. The form includes: 'Group Name' (text input), 'Group Type' (dropdown menu with 'Actions' selected), 'Caching Policy' (dropdown menu with 'Full Cache' selected), and 'Description' (text area). At the bottom, there are 'Create' and 'Reset' buttons.

2. In the Group Name box, type a unique name for the group.
3. Click in the Group Type box and choose IP Ranges.
4. Click in the Caching Policy box and select the caching policy you want. Generally the full cache setting gives the best performance.
5. Type any description and notes you want.
6. Click Create.

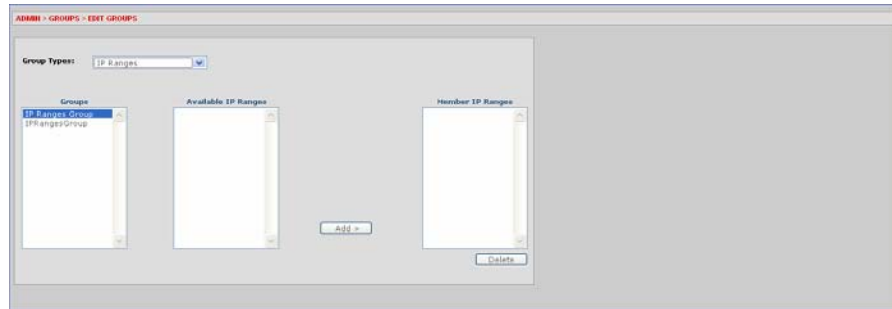
The Group Details page appears.



The screenshot shows the 'Group Details' page. At the top, it says 'Group Details'. Below that, there are 'Edit Group' and 'Delete' buttons. The page displays the following information: 'Group Id: 1204', 'Group Name: IP Ranges Group', 'Group Type: IP Ranges', and 'Cache Policy: Full Cache'. Below this information, there is a 'Modify' button. At the bottom, there is a form with 'Group Name' (text input with 'IP Ranges Group' entered), 'Caching Policy' (dropdown menu with 'Full Cache' selected), and 'Description' (text area). At the bottom of the form, there are 'Save' and 'Reset' buttons.

7. To change the group's name, type, or notes, see Viewing Details about a Group.
8. Click Edit Group.

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.



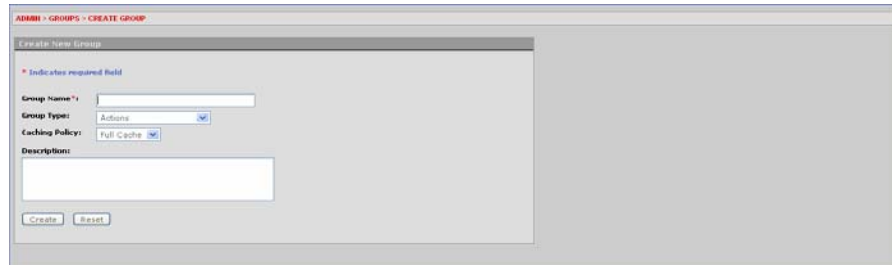
9. Select from the list of Available IP Ranges, click the IP range you want to add to the group and click Add.

If none exist you can create new IP ranges from the Admin menu.

*To create a group of devices*

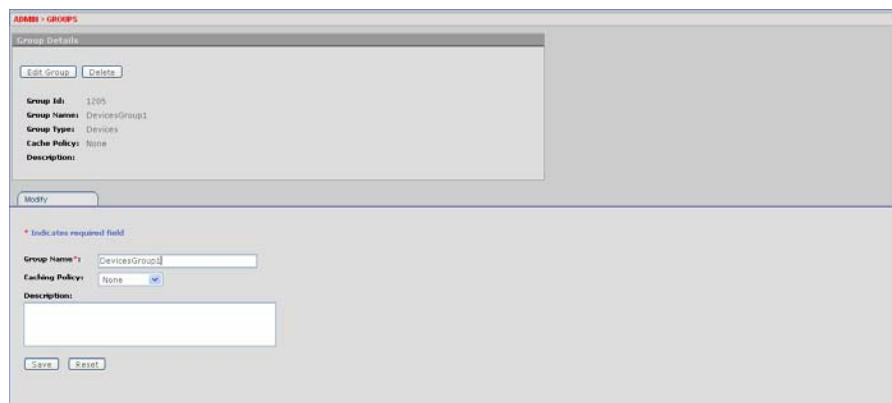
1. On the Admin menu point to Groups, and then click Create Group.

The Create Group page appears.



2. In the Group Name box, type a unique name for the group.
3. Click in the Group Type box and choose Devices.
4. Click in the Caching Policy box and select the caching policy you want.
5. Type any description and notes you want.
6. Click Create.

The Group Details page appears.



7. To change the group's name, type, or notes, see Viewing Details about a Group.
8. Click Edit Group.

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.

ARMM - GROUPS - EDIT GROUPS

Group Types: Devices

Groups

- DeviceGroup
- Restricted Group
- Restricted device list

Available Devices

Search

Device Group: --All--

Group Id: --All--

User Name:

Device Id:

IP Address:

Run Query

Click Run Query with appropriate search criteria.

Add >

Adding Single Device To Admin Group

Add Single Device here

Device Id:

Add Enter

Member Devices

Delete

9. To search for devices, enter search criteria to limit returns and click Submit Query.
10. Select any number of devices from the list of available devices and click Add.
11. To add a specific device to the group without running a query, click in the Device ID box at the bottom of the page, type the device ID and click Add.



## Creating a Group of Alerts or Actions

Action groups and alert groups are used as results within rules so that when a rule is triggered all of the actions or alerts within the groups are activated.

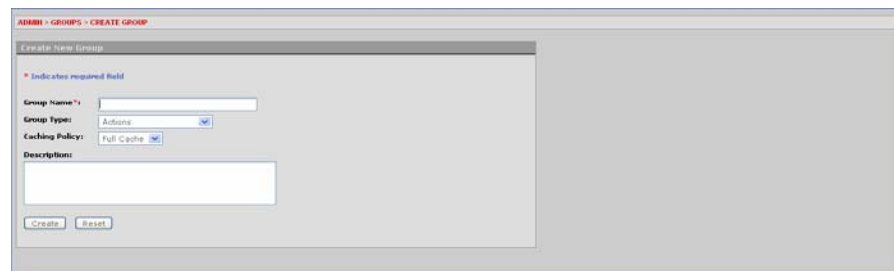
This section describes how to place a selection of actions into a group and how to configure/add alerts to a group. This section includes:

- To create an action group
- To create an alert group

### *To create an action group*

1. On the Admin menu point to **Groups**, and then click **Create Group**.

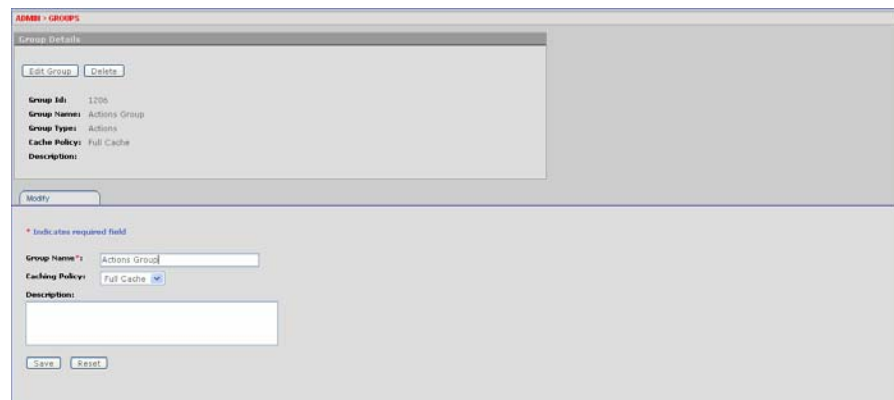
The Create Group page appears.



The screenshot shows the 'Create New Group' form. At the top, it says 'ADMIN > GROUPS > CREATE GROUP'. Below that is a header 'Create New Group'. A red asterisk indicates a required field. The form has four main sections: 'Group Name' with a text input field, 'Group Type' with a dropdown menu set to 'Actions', 'Caching Policy' with a dropdown menu set to 'Full Cache', and 'Description' with a large text area. At the bottom are 'Create' and 'Reset' buttons.

2. In the **Group Name** box, type a unique name for the group.
3. Click in the **Group Type** box and choose **Actions**.
4. Action groups are always cached so **Caching Policy** should be set to **Full Cache**.
5. Type any description and notes you want.
6. Click **Create**.

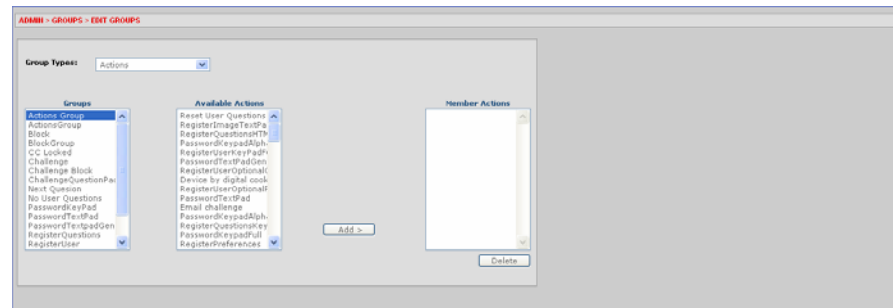
The Group Details page appears.



The screenshot shows the 'Group Details' page. At the top, it says 'ADMIN > GROUPS'. Below that is a header 'Group Details'. There are 'Edit Group' and 'Delete' buttons. The page displays the following information: 'Group Id: 1206', 'Group Name: Actions Group', 'Group Type: Actions', and 'Cache Policy: Full Cache'. Below this is a 'Description' field. At the bottom is a 'Modify' button. Below the 'Modify' button is a red asterisk indicating a required field. The form has three main sections: 'Group Name' with a text input field containing 'Actions Group', 'Caching Policy' with a dropdown menu set to 'Full Cache', and 'Description' with a large text area. At the bottom are 'Save' and 'Reset' buttons.

7. To change the group's name, type, or notes, see **Viewing Details about a Group**.
8. Click **Edit Group**.

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.

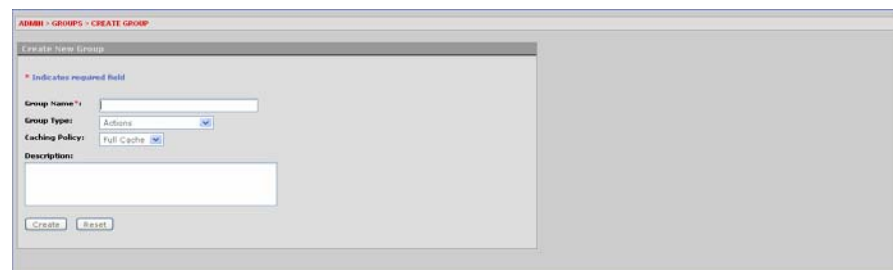


9. In the list of Available Actions, click the action you want to add to the group, and then click Add.

*To create an alert group*

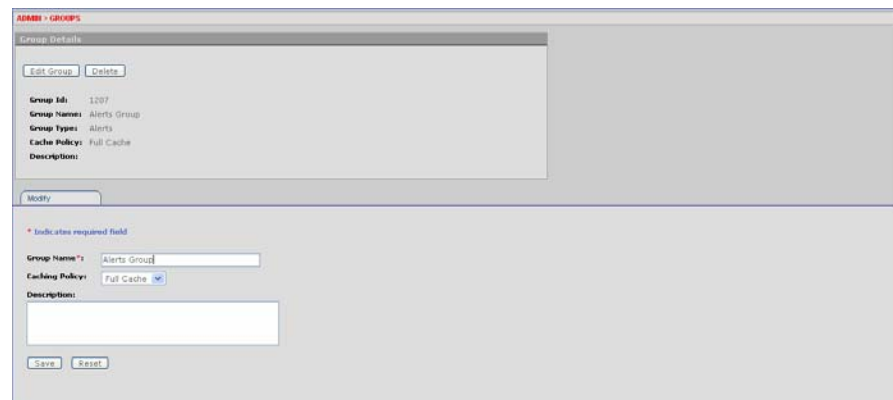
1. On the Admin menu point to Groups, and then click Create Group.

The Create Group page appears.



2. In the Group Name box, type a unique name for the group.
3. Click in the Group Type box and select Alerts.
4. Alert groups are always cached so Caching Policy should be set to Full Cache.
5. Type any description and notes you want.
6. Click Create.

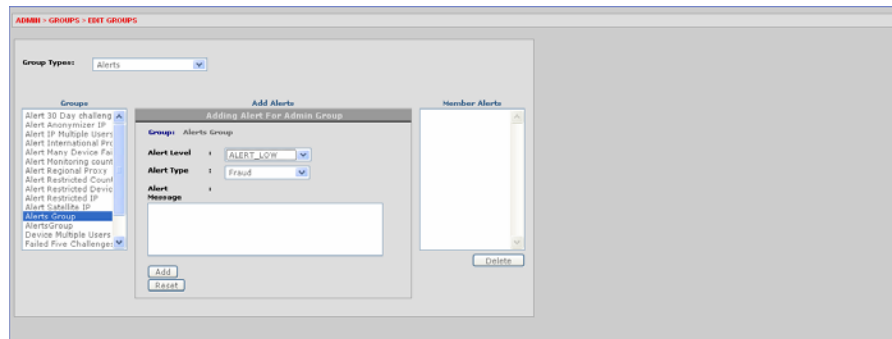
The Group Details page appears.



7. To change the group's name, type, or notes, see Viewing Details about a Group.

**8. Click Edit Group.**

The Edit Groups page appears. The name of the group you are editing is pre-selected in the list of Groups.



**9. Click in the Alert Level box and select the alert level you want.**

**10. Click in the Alert Type box and select the alert type you want.**

**11. Type an alert message. In most cases this message should correspond to the rule that will be configured to activate it.**

**12. Click Add.**

## Creating Groups of Networks, Service Providers, and Systems

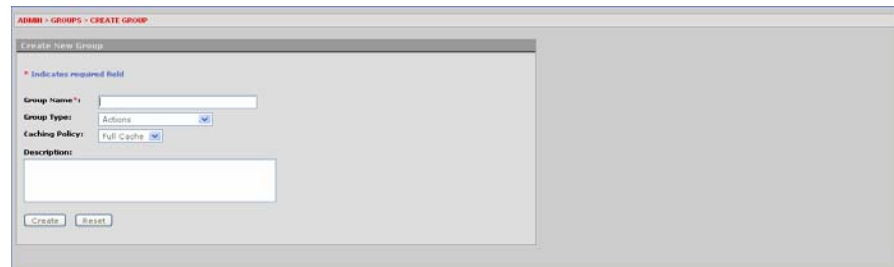
In addition to user, location, device, alert, and action groups, Adaptive Risk Manager Online allows you to create these group types:

- ISP
- ASN
- Top Level Domains
- Second Level Domains
- Ip Carriers
- Routing Type
- Connection Type
- Connection Speed
- Generic Strings
- Generic Integers
- Generic Longs

*To create a network, service provider, or system group*

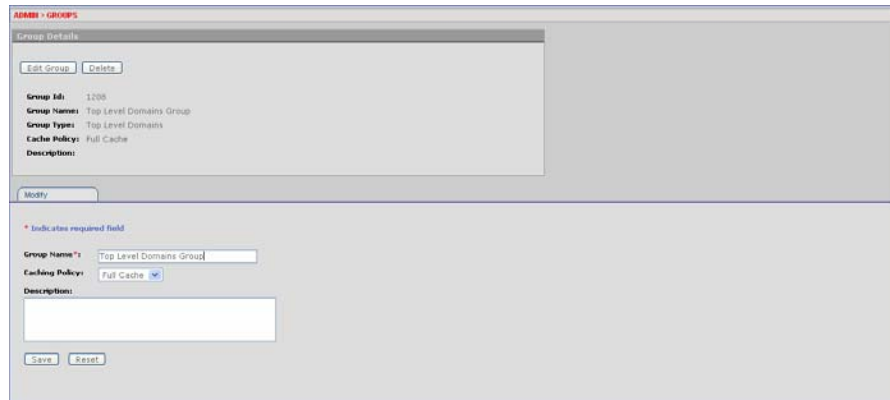
1. **On the Admin menu point to Groups, and then click Create Group.**

The Create Group page appears.

The screenshot shows a web browser window with the title 'ADMIN - GROUPS - CREATE GROUP'. The main content area is titled 'Create New Group' and contains a form. At the top of the form, there is a red asterisk and the text 'Indicates required field'. The form has four main sections: 'Group Name' with a text input field; 'Group Type' with a dropdown menu showing 'Actions'; 'Caching Policy' with a dropdown menu showing 'Full Cache'; and 'Description' with a large text area. At the bottom of the form are two buttons: 'Create' and 'Reset'.

2. **In the Group Name box, type a unique name for the group.**
3. **Click in the Group Type box and select the type you want.**
4. **Click in the Caching Policy box and select the caching policy you want.**
5. **Type any description and notes you want.**
6. **Click Create.**

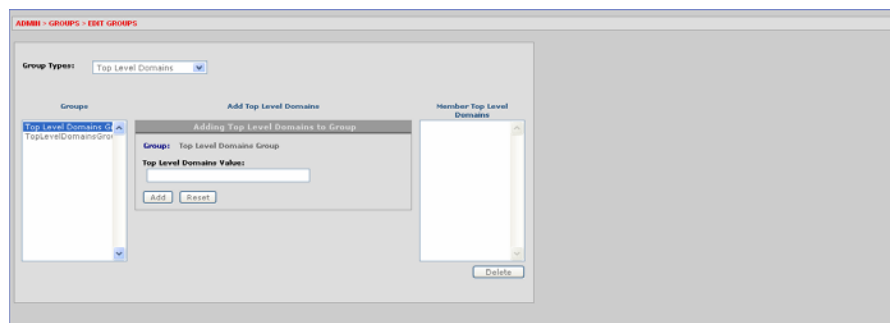
The Group Details page appears.



7. To change the group's name, type, or notes, see **Viewing Details about a Group**.

8. **Click Edit Group.**

The Edit Groups page appears. The group you are editing is pre-selected.



9. In the String Value field, enter the value you want.

10. **Click Add.**

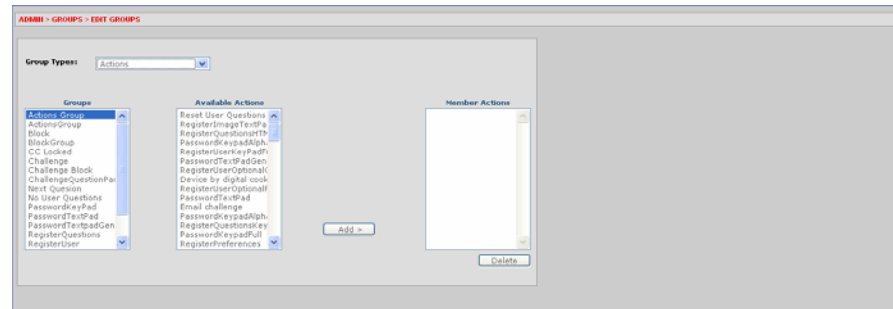
## Editing a Group

You can edit a group whenever you want.

*To edit a group*

1. **On the Admin menu point to Groups, and then click Edit Groups.**

The Edit Groups page appears.



2. **To filter the list of groups, click in the Group Type box and select the type you want.**

3. **In the list of Groups, select the group you want to edit.**

The Edit Group page appears and displays the options appropriate for the type of group you selected.

4. **Add or delete members of the group as necessary.**

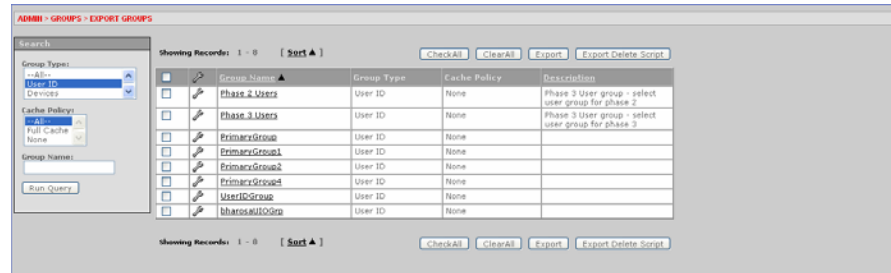
For additional information, see Organizing Users, Locations, and Devices into Groups and Creating a Group of Alerts or Actions.

## Exporting and Importing a Group

You can use the Export and Import Groups commands to export and import a group as an XML file.

### *To export a group*

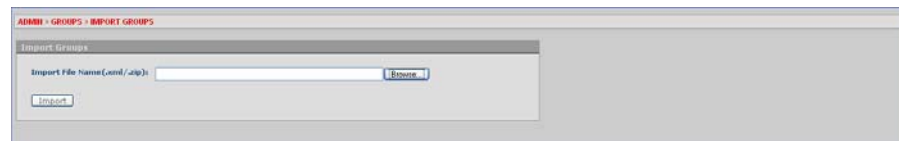
1. On the Admin menu, point to Groups and click then click Export Groups. The Export Groups page appears.



2. Enter search criteria and click Run Query to locate the group.
3. Click the checkbox next to each group you want to export.
4. Click Export in the lower right corner of the page.
5. Click OK to the confirmation. The Open dialog box appears.
6. Click Save To Disk and then click OK. The file is exported.

### *To import a group*

1. On the Admin menu, point to Groups and click then click Import Groups. The Import Groups page appears.



2. Click Browse and locate the group file you want to import.
3. Click Import. The group is imported.

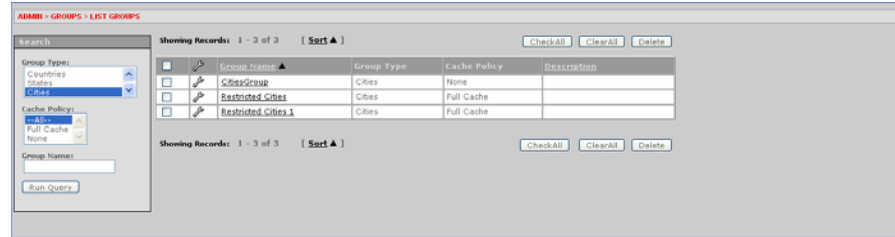
## Viewing a List of Groups

On the List Groups page, you can view a list of all groups, a list of groups of a certain type, or you can view just one group. The List Groups page provides access to the Group Details page and the Edit Group page for any group.

*To view a list of all groups*

1. On the Admin menu, point to Groups, and then click List Groups.

The List Groups page appears.



2. To display only the type of group you want to edit, select the type you want from the Group Type list and click Submit Query.
3. To find a specific group, in the Group Name box enter the name of the group and click Submit Query.
4. To edit a group in the list, click the wrench icon to the left of the group you want to edit.
5. To view the Details for a group, click the Group Name.

See Viewing Details about a Group.

6. To delete a group, select the checkbox to the left of the group name and then click Delete.

If the group is currently linked to a rule you will not be allowed to delete it.



## Viewing Details about a Group

The Group Details page allows you to view or change details about a group.

*To modify details about a group*

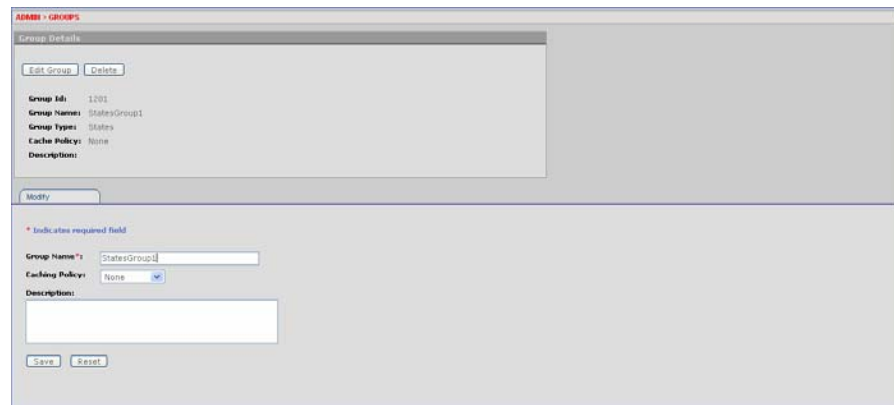
1. **On the Admin menu point to Groups, and then click List Groups.**

The List Groups page appears.

2. **Select the search criteria you want and click Submit Query.**

3. **Click a group name to view the details page for that group.**

The Group Details page appears.



The screenshot displays the 'Group Details' page. At the top, there are 'Edit Group' and 'Delete' buttons. Below these, the current group's details are listed: Group Id: 1591, Group Name: StatesGroup1, Group Type: States, Cache Policy: None, and Description: (empty). A 'Modify' button is located below the details. The 'Modify' section includes a legend indicating that an asterisk (\*) denotes a required field. The 'Group Name' field is required and contains 'StatesGroup1'. The 'Cache Policy' is a dropdown menu currently set to 'None'. The 'Description' field is a large text area. At the bottom of the 'Modify' section are 'Save' and 'Reset' buttons.

4. **To change the group name, click in the Group Name box and type a new name and then click Save.**

## Creating Models

A model is a collection of configured rule instances linked to User ID groups whose members are evaluated. Adaptive Risk Manager Online enables you to create models that can be applied to more than one User ID group.

Oracle Adaptive Access Manager is shipped with groups, models and rules pre-configured. These models are set up using best practices for the client's specific industry and needs.

*Model run time* refers to the point during the session the rules in a model should be evaluated. By default there are eleven model run times in Adaptive Risk Manager Online:

- Device Identification
- Pre-Authentication
- Post-Authentication
- In-Session
- AuthentiPad
- Preferences
- Challenge Question
- CC Challenge
- Forgot Password
- Invalid Login
- Wrong Password

### Notes:

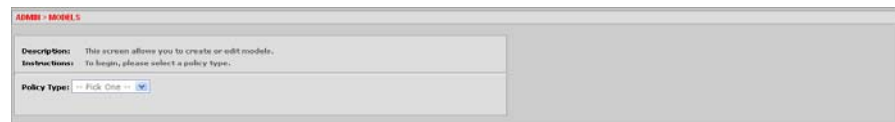
- In-Session models often require custom integration and therefore configuration is not covered as part of this Guide.
- In-Session models may not be supported in some UIO version 1.0 installations.

There are four *model policy types*. The policy types are Security, Business, Workflow, and 3<sup>rd</sup> Party.

### To create a new model

1. **On the Admin menu point to Models, and then click Create Models.**

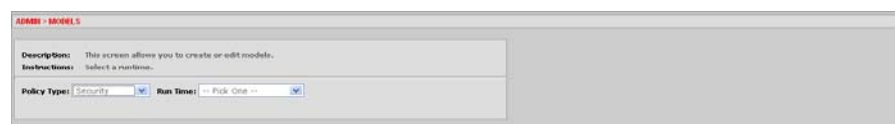
The Policy Type menu appears.



The screenshot shows a web form titled "CREATE + MODEL S". It contains a "Description:" field with the text "This screen allows you to create or edit models." and an "Instructions:" field with the text "To begin, please select a policy type." Below these fields is a "Policy Type:" dropdown menu with a blue arrow icon and the text "Pick One" next to it.

2. **In the Policy Type list, click the type of model you want.**

The Run Time menu appears.



The screenshot shows the same web form as above, but now the "Policy Type:" dropdown menu is set to "Security". A new "Run Time:" dropdown menu has appeared to the right of the "Policy Type:" menu, also with a blue arrow icon and the text "Pick One" next to it.

3. **In the Run Time list, click the run time you want.**

The Model Name menu appears.

The screenshot shows the 'ADMM - MODELS' page. At the top, there is a description: 'This screen allows you to create or edit models.' Below that, instructions state: 'Select an existing model OR -- New Model -- to create one.' There are three dropdown menus: 'Policy Type' set to 'Security', 'Run Times' set to 'Pre-Authentication', and 'Model Name' set to 'Loading...'. A 'Save' button is visible at the bottom right.

**4. In the Model Name list, click Create New Model.**

The Create New Model page appears.

The screenshot shows the 'ADMM - MODELS' page with the 'Model Name' dropdown set to '-- New Model --'. Below this, there are several input fields: 'Name' (text box), 'Status' (dropdown menu set to 'Active'), 'Scoring Engine' (dropdown menu set to '-- Pick One --'), and 'Weight' (text box set to '100'). There is also a 'Description' text box. A 'Save' button is located at the bottom right.

- 5. In the Model Name box, enter a name for the model.**
- 6. Click in the Status box and select the status you want.**
- 7. Click in the Scoring Engine box and select the scoring you want.**
- 8. In the Weight field, enter the weight you want.**
- 9. In the Description box, enter a description of the model.**
- 10. Click Save.**

The Model Details page for the new model appears.

The screenshot shows the 'ADMM - MODELS' page with the 'Model Name' dropdown set to 'Central Asia'. The 'Name' field contains 'Central Asia', 'Status' is 'Active', 'Scoring Engine' is 'Weighted Average', and 'Weight' is '100'. The 'Description' field contains 'Kyrgyzstan, Kazakhstan, Uzbekistan'. A 'Save' button is at the bottom right. Below the model details, there is a 'Rules' section with a description: 'This screen is used for adding, configuring, and editing rule instances.' It includes a 'Rule' dropdown menu set to '-- Pick One --' and a table with columns: 'Rule Name', 'Status', 'Score', 'Weight', 'Date', 'Action Group', and 'Description'. A red message box in the table area says: 'Please select a rule from the rules menu to add it to this model.'

## Editing a Model

You can edit a model's general information and add or delete rules as needed.

*To edit a model*

- 1. On the Admin menu point to Models and then click List Models.**  
The List Models page appears.
- 2. Enter the search criteria you want and click Run Query.**
- 3. On the List Models page, click the name of the model you want to edit.**

The Model Details page appears.

**ADMM - MODEL 1**

**Description:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

**Policy Type:** Security | **Run Times:** Post-Authentication | **Model Name:** Fraud - Alert Only

**Name:** Fraud - Alert Only | **Description:** Applied to groups with no challenge option. Only alerts are generated.  
**Status:** Active | **Scoring Engine:** Maximum | **Weight:** 100

**Rules** | Manual Overrides | Group Linking

**Description:** This screen is used for adding, configuring, and editing rule instances.  
**Instructions:** Select a rule from the pull down to add and configure it OR select a configured rule from the list below to edit.

**Rule:** Pick One

Rule Name	Status	Score	Weight	Date	Action Group	Description
<input type="checkbox"/> Device multiple users	Active	1000	100	08/15/2007 10:39		Multiple users from this device
<input type="checkbox"/> IP Max Users	Active	1000	100	08/15/2007 10:39		Multiple users trying to login from the same IP ad
<input type="checkbox"/> Many failures from device	Active	1000	100	08/15/2007 10:39		Many failures from device

- 4. To edit the model's general information, make the changes you want at the top of the page and then click Save.**

The Model Details page provides tabs to the Rules page, Manual Overrides page, and Group Linking page.

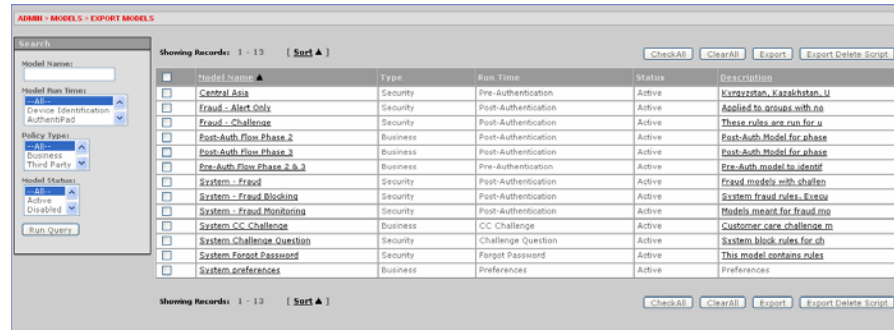
## Exporting and Importing a Model

You can use the Export and Import Models commands to export and import a model as an XML file.

### To export a model

1. On the Admin menu, point to Models then click Export Models.

The Export Models page appears.



2. Enter search criteria and click Run Query to locate the model.
3. Click the checkbox next to each model you want to export.
4. Click Export in the lower right corner of the page.
5. Click OK to the confirmation.

The Open dialog box appears.

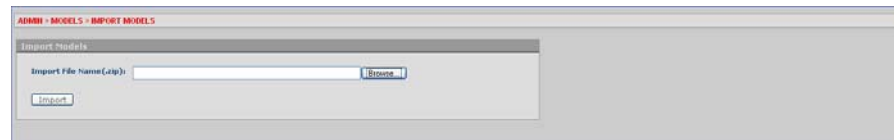
6. Click Save To Disk and then click OK.

The model is exported.

### To import a model

1. Before importing a model all of the groups that the model depends on need to be imported.
2. On the Admin menu, point to Models and click Import Models.

The Import Models page appears.



3. Click Browse and locate the model file you want to import.
4. Click Import.

The model is imported.

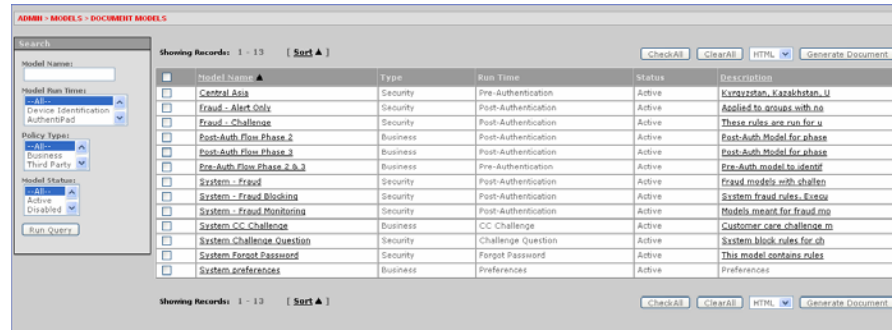
## Document Models

The Document Models page allows you to view at a glance the settings of all the rules in a model. You can also print a document containing these settings.

*To view the setting of the rules in a model*

1. On the Admin menu, point to Models and click Document Models.

The Document Models page appears.



2. To find a specific model, enter the name of the model in the Model Name field and click Run Query.
3. To find models with a specific run time, in the Run Time list, click the run time you want and click Run Query.
4. To find models with a specific policy type, in the Policy Type list, click the policy type you want and click Run Query.
5. To find models with a specific status, in the Model Status list, click the status you want and click Run Query.
6. To print a document of the rule settings in a model, select the model you want, select PDF or HTML, and click Generate Document.

## Policy Sets

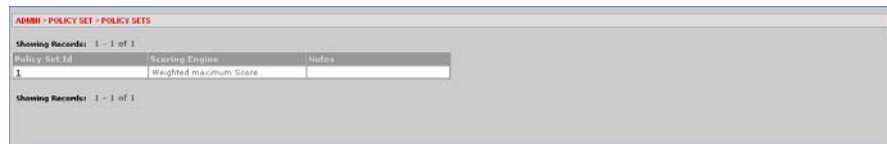
The Policy Sets page displays a list of the policy sets used to evaluate traffic in order to identify possible risks. This page provides access to the Policy details page where you can specify the scoring engine and the weighting you want to use for evaluating risk.

ORACLE ADAPTIVE ACCESS MANAGER uses the scoring engine to calculate the numeric score applied when calculating risk level. It then applies the weight—or multiplier value—to the score to determine its influence on the total score.

*To view a list of policy sets*

1. **On the Admin menu, point to Policy Sets and then click List Policy Sets.**

The Policy Sets page appears and displays the Policy Set ID and Scoring Engine for each policy set in the system.



Policy Set ID	Scoring Engine	Notes
1	Weighted maximum Score	

2. **To view details about a policy set, click the Policy Set ID you want.**

*To view and edit the policy set details*

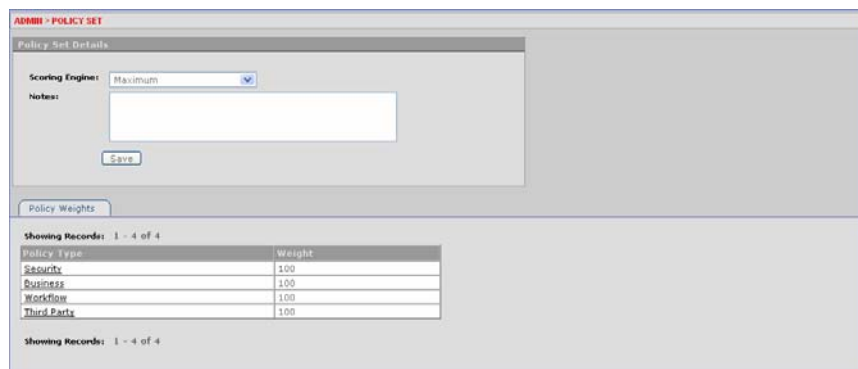
On the policy set details page you can specify the scoring engine used to calculate the score for the policy set that you want to use.

1. **On the Admin menu, point to Policy Sets and then click List Policy Sets.**

The Policy Sets page appears.

2. **Click the Policy Set ID you want.**

The Policy Set Details page appears and displays the scoring engine and the policy weights for the Policy Types included in the Policy Set. Each policy type contains all the corresponding models.



Scoring Engine: Maximum

Notes:

Save

Policy Weights

Policy Type	Weight
Security	100
Business	100
Workflow	100
Third Party	100

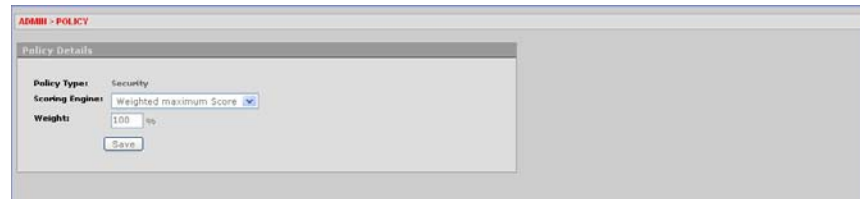
3. **To change the policy weight, in the Scoring Engine list, select the scoring engine you want and click Save.**

*To view and edit the policy details for a specific policy type*

On the policy details page you can specify the scoring engine used to calculate the score for the policy set and the weighting of this policy against other policies.

1. **On the Policy Set Details page, click the Policy Type you want.**

The Policy Details page appears.



The screenshot shows a web interface titled "ADMIN - POLICY". Below the title is a "Policy Details" section. It contains three fields: "Policy Type" with the value "Security", "Scoring Engine" with a dropdown menu showing "Weighted maximum Score", and "Weight" with a text input field containing "100" and a percentage sign. A "Save" button is located below the "Weight" field.

2. **To change the Scoring Engine, in the Scoring Engine, select the scoring engine you want.**
3. **To change the weight percentage, enter the percentage you want in the Weight field.**
4. **Click Save.**



## Adding a New Rule to a Model

To add a rule to a model

1. On the Admin menu point to Models and then click List Models.  
The List Models page appears.
2. Enter the search criteria you want and click Run Query.
3. Click the name of the model you want to edit.  
The Model Details page appears.

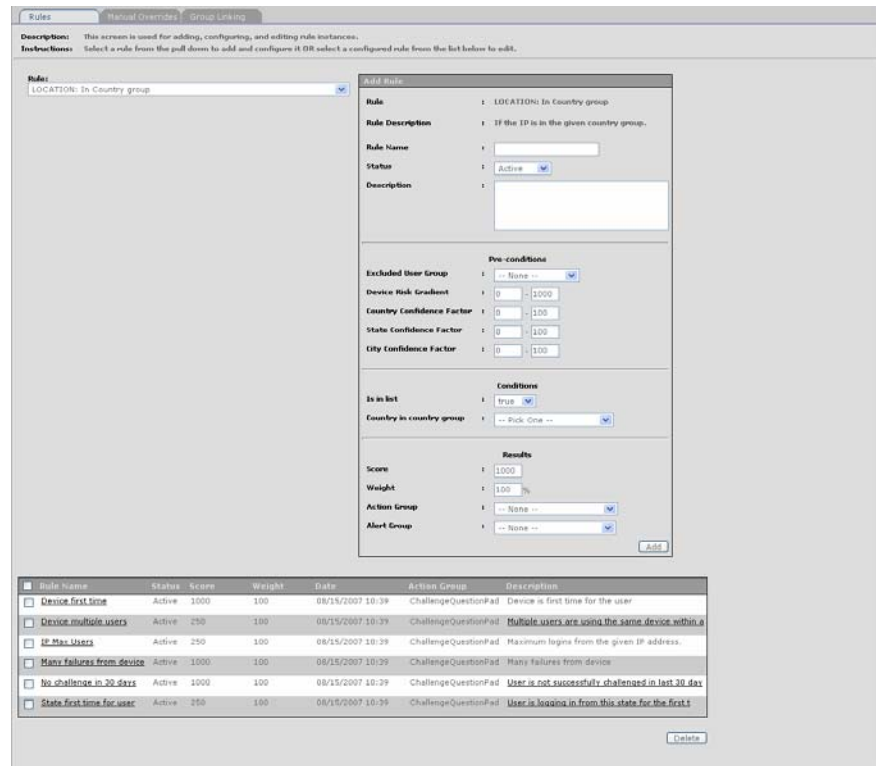
The screenshot shows the ADMANI - MODELS interface. The top section is the Model Details form, which includes fields for Name, Status, Scoring Engine, and Weight. The Name field is set to "Fraud - Challenge", Status is "Active", Scoring Engine is "Maximum", and Weight is "100". The Description field contains the text: "These rules are run for users who have opted for challenge question using TextPad". Below the form is a "Rules" section with a "Pick One" dropdown menu and a table of rules.

Rule Name	Status	Score	Weight	Date	Action Group	Description
<input type="checkbox"/> Device first time	Active	1000	100	08/15/2007 10:39	ChallengeQuestionPad	Device is first time for the user
<input type="checkbox"/> Device multiple users	Active	250	100	08/15/2007 10:39	ChallengeQuestionPad	Multiple users are using the same device within a
<input type="checkbox"/> IP Max Users	Active	250	100	08/15/2007 10:39	ChallengeQuestionPad	Maximum logins from the given IP address.
<input type="checkbox"/> Many failures from device	Active	1000	100	08/15/2007 10:39	ChallengeQuestionPad	Many failures from device
<input type="checkbox"/> No challenge in 30 days	Active	1000	100	08/15/2007 10:39	ChallengeQuestionPad	User is not successfully challenged in last 30 days
<input type="checkbox"/> State first time for user	Active	250	100	08/15/2007 10:39	ChallengeQuestionPad	User is logging in from this state for the first t

4. In the Rules list, click the name of the rule you want to add.

You might, for example, select the rule LOCATION: In Country group. This rule checks whether a country is a member of a specific country group. This rule could be used to black list countries.

The parameters of the rule appear in the Custom Rule area.



**5. In the Rule Name box, enter the name you want for this instance of the rule template.**

When you add a rule to a model you are adding an instance of a rule template. You can then customize that instance.

**6. Specify any settings needed for the pre-conditions.**

These settings determine if the rule will run.

**7. To exclude a user group from the rule, click in the Excluded User Group and select the user group whose members you want this rule to ignore.**

**8. If the rule instance you are configuring is dependent on device identification accuracy, enter a score range for Device Risk Gradient to specify the amount of device identification risk with which you want the run the rule.**

For example, if the range is 0 to 400, the rule will only run if the device ID is greater than 60% positive.

**9. If the rule instance you are configuring is dependent on IP location identification accuracy, enter a score range for Country, State, and City confidence factors to specify the amount of geo-location accuracy with which you want the run the rule.**

For example, if the range is 60 to 100 the rule will only run if the IP location is greater than 60% positive. This confidence factor is based on IP geolocation information provided by the IP location vendor.

**10. Specify the threshold values you want for any conditions.**

For example, enter the group ID or number of seconds elapsed.

**11. In the Actions Group list, select the group of actions you want triggered by this rule, if actions are required.**

**12. In the Alerts Group list, select the group of alerts you want sent if this rule is triggered.**

**13. Enter a rule score and weight value.**

You can change the weight value for a rule to instruct Adaptive Risk Manager Online to give more or less value to the total score.

**14. Click Add.**

Adaptive Risk Manager Online adds this rule instance to the list of rules in the model.

## Customizing a Rule

When you add a rule to a model you are not actually adding the rule itself, but rather you are adding an instance of a rule template for which you can edit the parameters.

When you add rules to a model, you select the rule you want to activate and then provide the threshold values. By so doing, you instruct Adaptive Risk Manager Online to activate a pre-defined set of actions, alerts and/or additional models when the threshold values are exceeded.

### *To customize a rule*

1. **Display the Model Details page for the model you want to edit.**
2. **At the bottom of the page, click the name of the rule you want to edit in the list of rules that have already been added to the model.**

The parameters of the rule appear in the Custom Rule area.

**Model Details**

**Description:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

Policy Type: Security | Run Times: Post-Authentication | Model Name: Fraud - Alert Only

Name: Fraud - Alert Only | Description: Applied to groups with no challenge option. Only alerts are generated.  
Status: Active  
Scoring Engine: Maximum  
Weight: 100

Save

**Rules** | Manual Overrides | Group Linking

**Description:** This screen is used for adding, configuring, and editing rule instances.  
**Instructions:** Select a rule from the pull down to add and configure it OR select a configured rule from the list below to edit.

Rules: Pick One

Rule Name	Status	Score	Weight	Date	Action Group	Description
Device multiple users	Active	1000	100	08/15/2007 10:39		Multiple users from this device
IP Max Users	Active	1000	100	08/15/2007 10:39		Multiple users trying to login from the same IP address
Many failures from device	Active	1000	100	08/15/2007 10:39		Many failures from device

Delete

3. **To change the name, make the change you want in the Rule Name box.**
4. **Specify the threshold values you want for any conditions.**  
For example, specify the group ID, list ID, number of seconds elapsed, or authentication status.
5. **To change the actions group triggered by this rule, select the actions group you want from the Actions Group list.**
6. **To change the alerts group triggered by this rule, select the alerts group you want from the Alerts Group list.**
7. **You can change the weight or score by selecting a different value from the lists.**
8. **Click Save.**

## Examples of Customized Rules

Below are some examples of customizing rules.

*To activate an action and/or alert if a user is accessing from more than x devices within the specified time:*

1. **On the Admin menu point to Models, and then click List Models.**
2. **Enter the search criteria you want and click Run Query.**
3. **On the List Models, click the name of the model you want to edit.**
4. **In the Rules list, select USER: Devices.**

The parameters for the rule are displayed in the Rule Instance Parameters area.

5. **Click in the Rule Name box and type a name for the rule.**
6. **Click the Max number of devices box and enter a threshold number**
7. **Click in the Duration box and specify the number of seconds you want.**

For example, you might enter 120 seconds.

8. **Click in the Action box and select the action group you want.**

For example, you might select an action group that includes Block so that Adaptive Risk Manager Online will prevent the login attempt.

9. **Click in the Alert box and select the alert group you want.**

For example, you might select an alert level of High if a user logs in from more than 2 devices within 120 seconds.

10. **Click Save.**

*To activate an action and/or alert if the number of users using this device exceeds x for the past x seconds:*

1. **On the Admin menu point to Models, and then click List Models.**
2. **On the List Models page, click the name of the model you want to edit.**
3. **In the Rules list, select DEVICE: Multiple Users.**

The parameters for the rule are displayed in the Rule Instance Parameters area.

4. **Click in the Rule Name box and type a name for the rule.**
5. **Click in the Seconds Elapsed box and type the number of seconds you want.**

For example, you might enter 120 so that Adaptive Risk Manager Online will take some action if more than x users use this device in less than 120 seconds.

6. **Click in the Maximum Number of Users Allowed box and type maximum number of users you want.**

For example, you might enter 2 as the maximum number of allowed users in 120 seconds.

7. **Click in the Action box and select the action group you want.**

For example, you might select an action group that includes Block.

**8. Click in the Alert box and select the alert group you want.**

For example, you might select an alert group that includes a High alert.

**9. Click Save.**

*To activate an action and/or alert if the number of login attempts with the given client exceeds x for the given time period:*

**1. On the Admin menu point to Models, and then click List Models.**

**2. On the List Models page, select the model you want to edit.**

**3. In the Rules list, select USER: Client And Status.**

The parameters for the rule are displayed in the Rule Instance Parameters area.

**4. Click in the Rule Name box and type a name for the rule.**

**5. Click in the Used Client and select the client you want.**

For example, you might select PinPad so that if the user enters the pin using a PinPad more than x times for the given period Adaptive Risk Manager Online will take some specified set of actions.

**6. Click in the More than box and type maximum of attempts.**

For example, you might enter 5.

**7. Click in the Duration Condition box and type the amount of time you want to evaluate.**

For example, you might enter 30 minutes as the time in which a user can use the PinPad 5 times before Adaptive Risk Manager Online takes specified action.

**8. Click in the Action box and select the action group you want.**

For example, you might select an action group that includes Challenge Questions.

**9. Click in the Alert box and select the alert group you want.**

For example, you might select an alert group that includes a Medium alert.

**10. Click Save.**

*To activate an action and/or alert if the IP is in the given country group:*

**1. On the Admin menu point to Models, and then click List Models.**

**2. On the List Models page, click the name of the models you want to edit.**

**3. In the Rules list, select LOCATION: In Country Group.**

The parameters for the rule are displayed in the Rule Instance Parameters area.

**4. Click in the Rule Name box and type a name for the rule.**

**5. Click in the Group ID box and select the group of counties you want.**

For example, you might want to select the group of countries that you created from which there have been many fraud attempts in the past three months.

**6. Click in the Action box and select the action group you want.**

For example, you might select an action group that includes Block.

**7. Click in the Alert box and select the alert group you want.**

For example, you might select an alert group that includes a Medium alert.

**8. Click Save.**

## Editing a Model's Links

You can add and delete the User ID groups linked to a model as needed. Multiple User ID groups can be linked to a single model if required. If a model's name starts with the word "system" then its rules will apply to all users on the system regardless of group linking.

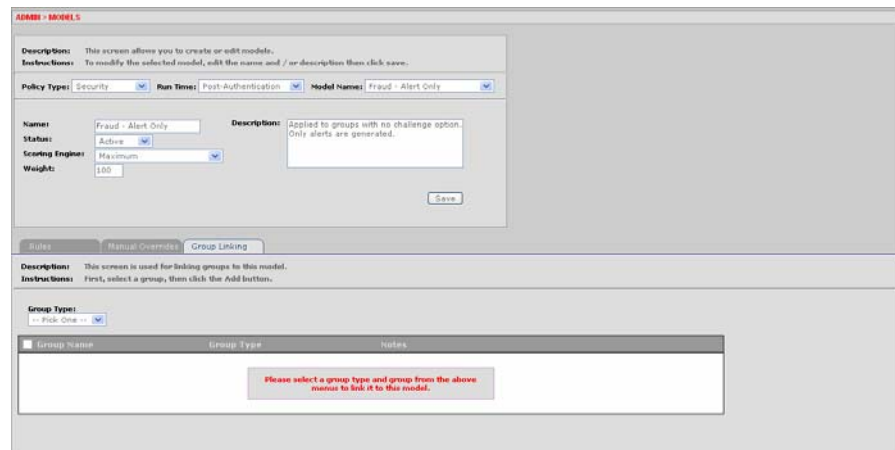
*To edit a model's links*

1. On the Admin menu point to Models, and then click List Models.
2. Enter the search criteria you want and click Run Query.
3. In the List Models page, click the name of the model you want to edit.

The Model Details page appears.

4. Click the Group Linking tab.

The Group Linking page appears.



**ADD - MODEL**

**Descriptions:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

Policy Type: Security Run Times: Post-Authentication Model Name: Fraud - Alert Only

Name: Fraud - Alert Only Description: Applied to groups with no challenge option. Only alerts are generated.  
Status: Active  
Scoring Engine: Maximum  
Weight: 100

Save

Rules Manual Overrides **Group Linking**

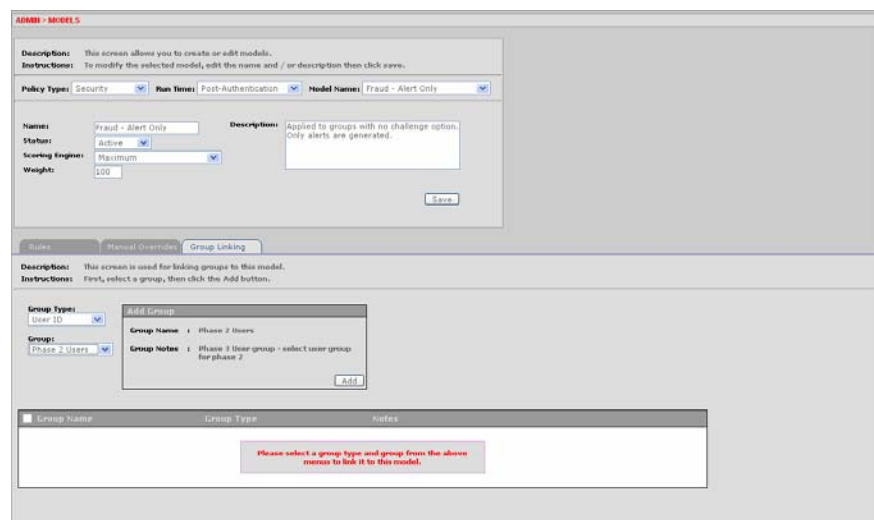
**Descriptions:** This screen is used for linking groups to this model.  
**Instructions:** First, select a group, then click the Add button.

Group Type: Pick One

Group Name	Group Type	Notes
Please select a group type and group from the above menus to link it to this model.		

5. Click in the Group Types box and select the User ID group type.
6. Click in the Group Name box and select the group you want to link.

The User ID group's details appear in the Add Group area.



**ADD - MODEL**

**Descriptions:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

Policy Type: Security Run Times: Post-Authentication Model Name: Fraud - Alert Only

Name: Fraud - Alert Only Description: Applied to groups with no challenge option. Only alerts are generated.  
Status: Active  
Scoring Engine: Maximum  
Weight: 100

Save

Rules Manual Overrides **Group Linking**

**Descriptions:** This screen is used for linking groups to this model.  
**Instructions:** First, select a group, then click the Add button.

Group Type: User ID

Group: Phase 2 Users

**Add Group**

Group Name: Phase 2 Users  
Group Notes: Phase 2 User group - select user group for phase 2

Add

Group Name	Group Type	Notes
Please select a group type and group from the above menus to link it to this model.		



## **7. Click Add.**

The new link is added to list of linked User groups.

To delete a linked group, select the checkbox next to the group you want to delete and then click Delete.

## Specifying the Scoring of Rule Return Combinations

ORACLE ADAPTIVE ACCESS MANAGER uses a system of numeric scoring to represent the risk level associated with a specific situation. Each rule has its own default score and weight. Most rules are Boolean and return a value of True or False; they either trigger the rule or they don't. ORACLE ADAPTIVE ACCESS MANAGER uses the score and weight of each rule within a model to calculate the total model risk score.

The Manual Overrides page enables you to create outcomes based strictly on the combinations of rule triggers. You can specify a score, action group and alert group based on different rule return combinations or you can point to a nested model to further evaluate the risk. The rows of manual overrides evaluate from top to bottom, stopping as soon as a rule return combination is matches. Actions and alerts triggered by a manual override will be added to any actions and alerts triggered by individual rules.

### *To specify rule return combinations*

1. On the Admin menu point to Models, and then click List Models.
2. Enter the search criteria you want and click Run Query.
3. In the List Models page, click the name of the model you want to edit.

The Model Details page appears.

4. Click the Manual Overrides tab in the lower half of the page.

The Manual Overrides page appears.

The screenshot shows the 'Manual Overrides' page in the Oracle Adaptive Access Manager. The page title is 'ADMIN - MODELS'. It contains a form for editing a model named 'System - Fraud Monitoring'. The form has fields for Name, Status, Scoring Engine, and Weight. Below the form, there are tabs for 'Rules', 'Manual Overrides', and 'Group Library'. The 'Manual Overrides' tab is selected, showing a table with columns for 'Order', 'Monitor Country', 'IP - RT', 'IP - RT', 'IP - RT', 'IP - RT', 'Score / Model', 'Alert Group', and 'Action Group'. The table has one row with values: 1, Any, Any, Any, Any, Any, -- Pick One --, -- None --, and -- None --. There are 'Delete', 'Add New', and 'Save' buttons at the bottom of the table.

5. Select the return value permutations you want for each rule in the first row.
6. In the Score/Model column, select score or model to specify whether the result should be a score or point to a nested model.
7. If you selected Score, in the right-hand column specify the score you want to assign to that combination.
8. If you selected Model, in the right-hand column specify the model you want Adaptive Risk Manager Online to run to further evaluate the risk.
9. If you want to specify other rule return combinations, click Add New to add another row.
10. Repeat steps 4 through 7 for each rule return combination you want.
11. Click Save.

*To delete a rule return combination*

1. **Display the Manual Overrides page.**
2. **Select the check to the left of the combination you want to delete and click Delete.**

*To change the sequence of a rule return combination*

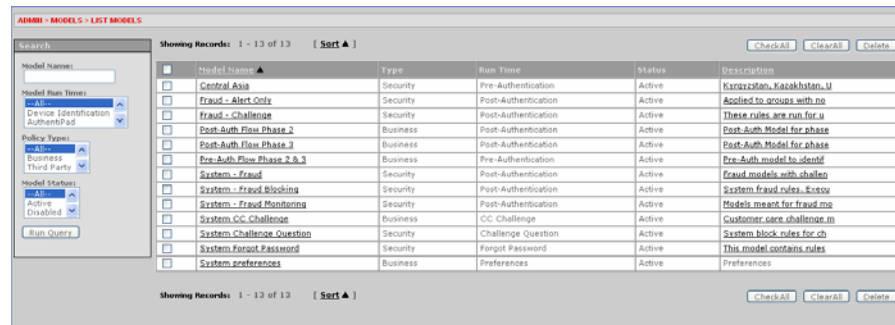
1. **Display the Manual Overrides page.**
2. **To change the numbering sequence of a combination at once, click in the number field and type the new number then click Save.**

## Viewing a List of Models

On the List Models page, you can view a list of all models. The List Models page provides quick access to the Model Details page for any model.

*To view a list of models*

1. On the Admin menu, point to Models, and then click List Models.  
The List Models page appears.
2. Enter the search criteria you want and click Run Query.



3. To filter the list by Model Type, select the type you want in the Model Type list and click Submit Query.
4. To filter the list by Model Run Time, select the run time you want in the Model Run Time list and click Submit Query.
5. To filter the list by status, click status you want in the Model Status list and click Submit Query.
6. To find a specific model, type the name of the model in the Model Name box and click Submit Query.
7. To view the details page for a model, click the Model Name.
8. To delete a model, select the checkbox to the left of the model name and then click Delete. If there are dependent groups you will see a warning message.

## Viewing and Changing Model Details

*To modify details about a model*

1. **On the Admin menu point to Models, and then click List Models.**  
The List Models page appears.
2. **Enter the search criteria you want and click Run Query.**
3. **Click the name of the model you want to view or modify.**  
The Model Details page appears.

**ADAPTRISK - MODEL S**

**Description:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

Policy Type: Security Run Times: Post-Authentication Model Name: Fraud - Alert Only

Name: Fraud - Alert Only Description: Applied to groups with no challenge option. Only alerts are generated.

Status: Active

Scoring Engine: Maximum

Weight: 100

Save

Rules Manual Overrides Group Linking

**Description:** This screen is used for adding, configuring, and editing rule instances.  
**Instructions:** Select a rule from the pull down to add and configure it OR select a configured rule from the list below to edit.

Rules

Pick One --

Rule Name	Status	Score	Weight	Date	Action Setup	Description
<input type="checkbox"/> Device multiple users	Active	1000	100	08/15/2007 10:39		Multiple users from this device
<input type="checkbox"/> IP Max Users	Active	1000	100	08/15/2007 10:39		Multiple users trying to login from the same IP ad
<input type="checkbox"/> Many failures from device	Active	1000	100	08/15/2007 10:39		Many failures from device

Delete

4. **To change the model name, click in the Model Name box and type the name you want.**
5. **To change the description, click in the Description box and edit the description.**
6. **Click Save.**

*To view details about the user groups linked to a model*

1. **On the Admin menu point to Models, and then click List Models.**  
The List Models page appears.
2. **Enter the search criteria you want and click Run Query.**
3. **Click the name of the model you want.**  
The Model Details page appears.
4. **Click the Group Linking tab.**  
All of the user ID groups linked to the model are listed.

**ADAM - MODEL 5**

**Description:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

**Policy Type:** Business | **Run Time:** Post-Authentication | **Model Name:** Post-Auth Flow Phase 2

**Name:** Post-Auth Flow Phase 2 | **Description:** Post-Auth Model for phase 2 implementation. Optional registration.

**Status:** Active | **Scoring Engine:** Weighted Average | **Weight:** 100

**Buttons:** Save

---

**Rules** | Manual Overrides | **Group Linking**

**Description:** This screen is used for linking groups to this model.  
**Instructions:** First, select a group, then click the Add button.

**Group Type:** Pick One

Group Name	Group Type	Notes
<input type="checkbox"/> Phase 2 Users	User ID	Phase 2 User group - select user group for phase 2
<input type="checkbox"/> bhans00Grp	User ID	

**Buttons:** Delete

- To delete a group, select the checkbox to the left of the group and then click Delete.**

*To view details about the rules contained in a model*

- On the Admin menu point to Models, and then click List Models.**  
The List Models page appears.
- Enter search criteria and click Run Query.**
- Click the name of the model you want to modify.**  
The Model Details page appears.
- Click the Rules tab.**  
The rules contained in the model are listed.
- To view the rule details, click the name of the rule you want.**  
The parameters appear in the Custom Rule area.

**ADMM - MODELS**

**Description:** This screen allows you to create or edit models.  
**Instructions:** To modify the selected model, edit the name and / or description then click save.

Policy Type: Business Run Times: Post-Authentication Model Name: Post-Auth Flow Phase 2

Name: Post-Auth Flow Phase 2 Description: Post-Auth Model for phase 2 implementation. Optional registration.  
 Status: Active Scoring Engine: Weighted Average Weight: 100

**Rules** | **NATURAL OVERLAP** | **GROUP LABELS**

**Description:** This screen is used for adding, configuring, and editing rule instances.  
**Instructions:** Select a rule from the pull down to add and configure it OR select a configured rule from the list below to edit.

Rules: -- Pick One --

**Customize Rule**

Rule: USER: Question Status (3)  
 Rule Description: Question status of the user  
 Rule Name: Question Registered  
 Status: Active  
 Description: Does the user have security questions registered?

**Pre-conditions**

Excluded User Group: -- None --  
 Device Risk Gradient: 0 - 1000  
 Country Confidence Factor: 0 - 100  
 State Confidence Factor: 0 - 100  
 City Confidence Factor: 0 - 100

**Conditions**

User Question Status: Set  
 is: true

**Results**

Score: 1000  
 Weight: 100 %  
 Action Group: -- None --  
 Alert Group: -- None --

Rule Name	Status	Score	Weight	Date	Action Group	Description
<input checked="" type="checkbox"/> Question Registered	Active	1000	100	08/15/2007 10:28		Does the user have security questions registered?
<input checked="" type="checkbox"/> Registered User	Active	1000	100	08/15/2007 10:30		User has completed registration & personalization.
<input checked="" type="checkbox"/> Unregistered user	Active	1000	200	08/15/2007 10:30		User not yet completed registration & personalization.

[Delete](#)

6. To view the Rule Details page, click the rule you want to see.
7. To view a complete description of the rule, click the link in the Description column.

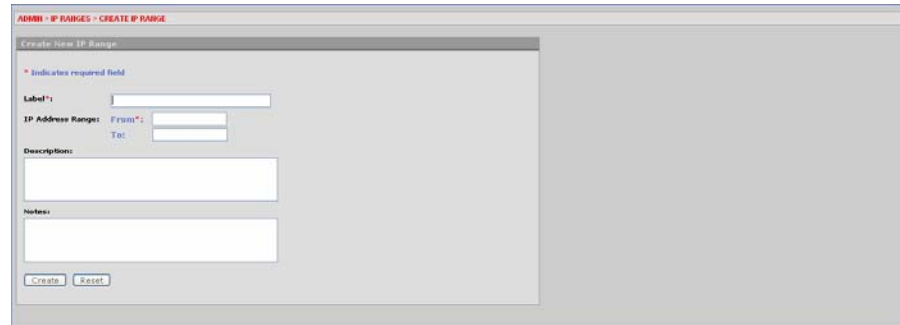
## Creating a Group of IP Ranges

You can create a group of IP ranges to use as a parameter in rules. For example, the result of a rule's execution might be to block a user if their IP address falls within a predefined range.

*To create a group of IP ranges*

1. **On the Admin menu point to IP Range, then click Create IP Range.**

The Create New IP Range page appears.



The screenshot shows a web browser window titled 'ADMIN - IP RANGES - CREATE IP RANGE'. The main content area is a form titled 'Create New IP Range'. At the top of the form, there is a red asterisk and the text '\* Indicates required field'. The form contains the following fields: 'Label:' with a text input box; 'IP Address Range:' with two sub-fields, 'From:' and 'To:', each with a text input box; 'Description:' with a larger text area; and 'Notes:' with another larger text area. At the bottom of the form, there are two buttons: 'Create' and 'Reset'.

2. **Click in the Label box and type a label for the range.**
3. **Click in the From box and type the starting IP range.**
4. **Click in the To box and type the ending IP range.**
5. **Type any description and notes you want.**
6. **Click Create.**

The IP Range Details page appears.

7. **To change the label or IP range, click Modify.**



## Viewing a list of IP Ranges

*To view a list of IP ranges*

1. On the Admin menu point to IP Ranges, and then click List IP Ranges. The List IP Ranges page appears.

Label	From IP Address	To IP Address	Description	Notes
Click Run Query with appropriate search criteria.				

2. Enter the search criteria you want and click Run Query.
3. To view IP range details, click the IP range Label you want.
4. To view details about the IP details, click the link in the From or To IP address column.

*To view details about an IP range*

1. On the Admin menu point to IP Ranges, and then click List IP Ranges. The List IP Ranges page appears.
2. Enter search criteria and click Run Query.

Label	From IP Address	To IP Address	Description	Notes
<html>[PRange1,/html>	192.168.0.10	192.168.0.20		

3. Click the link in the Label column. The IP Details page appears.

IP Range Details

Details

IP Range Id: 1  
From IP Address: 192.168.0.10  
To IP Address: 192.168.0.20  
Label: <html>[PRange1,/html>  
Description:  
Notes:

Modify

\* Indicates required field

IP Range Id: 1  
Label\*: <html>[PRange1,/html>  
IP Address Range: From\*: 192.168.0.10 To: 192.168.0.20  
Description:  
Notes:

Save Reset

## Viewing a List of Rule Templates in the System

*To view a list of all the rule templates in the system*

1. On the Admin menu, point to Rules Template and then click List Rule Templates.

The List Rule Templates page appears.

The page displays the list of unconfigured rules.

Rule Name	Type	Status	Description	Notes
<input type="checkbox"/> Session: Check param value	In Session	Active	Check to see if specified parameter value is more than specified value	
<input type="checkbox"/> Session: Check param value for regex	In Session	Active	Check to see if specified parameter value matches regular expression	
<input type="checkbox"/> Session: IP Changed	In Session	Active	IP Address is changed since transaction is started	
<input type="checkbox"/> Session: Money movement	In Session	Active	Money movement with amount greater than	
<input type="checkbox"/> Session: Transaction type in time and value more than	In Session	Active	Transaction in past time with value more than	

2. To filter the list by type, click in the Rule Type box and select the type you want and click Submit Query.
3. To filter the list by status, click in the Rule State box and select the status you want and click Submit Query.
4. To quickly locate a rule, type the name of the rule in the Rule Name box and click Submit Query.
5. To modify the rule description or status, click the rule name.
6. To delete a rule, select the checkbox next to the rule name, and then click Delete. Warning, this will completely delete the rule and all its instances from the system.

## Exporting and Importing a Rule Template

### To export a rule template

1. On the Admin menu, point to Rules Template and then click Export Rule Templates.

The Export Rule Templates page appears.

2. Enter the search criteria you want and click Run Query.

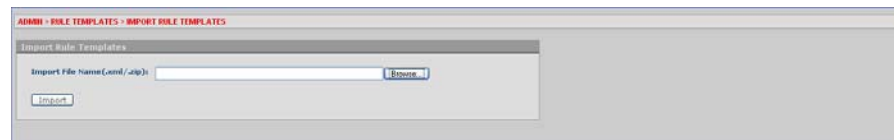


3. Select the checkbox next to each rule template you want to export.
4. Click Export.
5. Click OK to the confirmation.
6. Click OK to save the rule template to disk.

### To import a rule template

1. On the Admin menu, point to Rules Template and then click Import Rule Templates.

The Import Rule Templates page appears.



2. Click Browse and locate the rule template you want to import.
3. Click Import.

The imported template appears in the List of Rule Templates.

## Scenarios

This section provides scenarios for setting up and configuring Adaptive Risk Manager Online to initiate an action in response to different situations.

*To create a rule to trigger if more than a set number of users log in from a location in a set amount of time.*

1. **Create a model to hold the rule you will add next.**
2. **Add the rule named Location: IP Max Users to the model.**
3. **Configure the seconds elapsed to 30.**
4. **Set max number of users to 3**
5. **Create an *Action* group to be triggered if the rule returns a true result.**
6. **Add the Block Action to the Action Group.**
7. **Link User group and Model.**

*To create a rule forcing the system to ask a challenge question the first time a user attempts to log in from a new, unrecognized device*

1. **Create a model to hold the rule you will add next.**
2. **Add the rule named Device: Device First Time For User to the model.**
3. **Create an *Action* group to be triggered if the rule returns a true result.**
4. **Add the Question/Answer action to the group.**
5. **Link User Group and Model.**

*To create a rule blocking users following a certain number of login failures*

1. **Create a model to hold the rule you will add next.**
2. **Add the rule named User: Multiple Failures to the model.**
3. **Configure rule to the maximum number of failed login attempts for a given period of time.**
4. **Create Action group.**
5. **Add the Block action to the group.**
6. **Link User Group and Model.**

## Description of Rules

The table below includes a list of rules and rule definitions in the system.

Rule Name	Type	Status	Description
Always On - User	User	Active	This rule always gets processed
Device Id: Cookie state	User Device Id rules	Active	Check the cookie state for the given device and user
Device Id: Cookies Match	Device Id rules	Active	Tracker Node Matches for both cookies.
Device Id: Header data match	Device Id rules	Active	Determines if header data is match
Device Id: Header data match percentage	Device Id rules	Active	Determines if header data match percentage is within specified range.
Device Id: Header data present	Device Id rules	Active	Determines if header data is present
Device Id: Http Header data Browser match	Device Id rules	Active	Determines if Browser is match d based on http header data.
Device Id: Http Header data Browser upgrade	Device Id rules	Active	Determines if Browser is upgraded based on http header data.
Device Id: Http Header data OS match	Device Id rules	Active	Determines if OS match based on http header data
Device Id: Http Header data OS upgrade	Device Id rules	Active	Determines if OS is upgraded based on http header data. Check is based on versions.
Device Id: Is Cookie disabled	Device Id rules	Active	Determines if cookie is disabled for the user based on history.
Device Id: Is Cookie empty	Device Id rules	Active	Determines if cookie value is empty or not empty. Validation check is not included.
Device Id: Is Cookie from same device	Device Id rules	Active	Determines if the http and flash cookies are from same device. Automatically checks old nodes, if current node is not found.
Device Id: Is Cookie Valid	Device Id rules	Active	Determines if there is a valid node for given cookie value.
Device Id: known header data match percentage.	Device Id rules	Active	Determines if known header data match percentage is within specified range.
Device Id: User ASN first time	User Device Id rules	Active	This checks to see if the user has used this ASN successfully previously
Device Id: User Carrier first time	User Device Id rules	Active	This checks to see if the user has used this Carrier successfully previously
Device Id: User IP first time	User Device Id rules	Active	This checks to see if the user has used this IP successfully previously
Device Id: User used this finger print	User Device Id rules	Active	This checks to see if the user has used this fingerprint previously
DEVICE: Browser header substring	Device	Active	Checks whether the supplied string exists as a substring in the browsers header information.

Rule Name	Type	Status	Description
DEVICE: Device in list	Device	Active	Check to see if this device is in list.
DEVICE: Multiple Users	Device	Active	Maximum users using this device for the past x seconds
DEVICE: Timed not status	Device	Active	Maximum login attempts for all but the given status within the given time period.
DEVICE: Used count for User	Device	Active	Device used count
LOCATION: In Country group	Location	Active	If the IP is in the given country group.
LOCATION: In IP group	Location	Active	If the IP is in the IP group.
LOCATION: IP Max Users	Location	Active	Maximum number of users using the current ip address within the given time duration.
LOCATION: IP routing type	Location	Active	Routing type for the IP. It could be fixed/static, anonymizer, AOL, POP, Super POP, Satellite, Cache Proxy, International Proxy, Regional Proxy, Mobile Gateway or Unknown
USER: Account Status	User	Active	Account status of the user
USER: Action Count	User	Active	Checks action counter for the given action.
USER: Authentication Mode	User	Active	Check user authentication mode.
USER: Challenge Channel Failure	User	Active	If a user has a failure counter value over a specified value for more than a specific time from specific channel
USER: Challenge Failure	User	Active	If a user has a failure counter value over a specified value for more than a specific time
USER: Challenge Maximum Failures	User	Active	Check to see if user failed to answer challenge question for specefied number of times.
USER: Challenge timed	User	Active	Check to see if user answered challenge question successfully in last n days.
USER: Question Failure	User	Active	Checks to see how many questions have failures
USER: Question Status	User	Active	Question status of the user
USER: State first time for user	User	Active	Is the user using this State for the first time
WF KBA: Group Date Element After	Device	Active	Check to see if the group date is after current date

## Managing KBA Challenge Questions

The default KBA configuration presents customers with three question menus. When a customer registers, he or she is required to select one question from each menu. These three questions become the customer's "registered questions". The KBA functionality allows you to manage these challenge questions.

*To view a list of all questions*

On the List Questions page you can view a list of all challenge questions and search the question repository based on various criteria. The List Questions page provides access to the Questions Details page for any question.

1. On the Admin menu, point to KBA, point to Questions, and then click List Questions.

The List Questions page appears.

**ADMIN > KBA > QUESTIONS > LIST QUESTIONS**

**Description:** This page allows you to search the question repository based on various criteria.  
**Instruction:** Search for the desired questions, then click the search icon next to any you would like to edit.

Showing Records: 1 - 12 of 12 [Sort ▼] [Select All] [Export] [Export Delete Script] [Delete] [Enable] [Disable]

Search: [Search Icon]

Category: [Significance Other] [Sports] [Other] [Submit Query]

Registration Validation: [All] [Alpha, case-insensit...] [Alpha, case-sensitiv...] [Submit Query]

Answer Validation: [All] [Date Answer Hint] [Submit Query]

Status: [All] [Disabled] [Submit Query]

Question ID: [Submit Query]

Question Keyword: [Submit Query]

Ignore Dates: [ ]

From Date: [08/16/2007 14:50] [Submit Query]

To Date: [08/22/2007 23:59] [Submit Query]

ID	Updated	Status	Question	Category	Registration Validation	Answer Validation
202	08/16/2007 14:50	Active	What was your father's profession when you were born?	Your Birth	None	None
201	08/16/2007 14:50	Active	What is the holiday closest to your birthday?	Your Birth	None	None
200	08/16/2007 14:50	Active	Who was the US President when you were born?	Your Birth	None	None
199	08/16/2007 14:50	Active	How old was your father when you were born?	Your Birth	None	None
198	08/16/2007 14:50	Active	How old was your mother when you were born?	Your Birth	None	None
197	08/16/2007 14:50	Active	What is the name of the hospital you were born in?	Your Birth	None	None
196	08/16/2007 14:50	Active	What was your birth weight (pounds and ounces i.e. 7 lbs 11 oz or 7.13)?	Your Birth	None	None
195	08/16/2007 14:50	Active	What is the ZIP code where you grew up?	Your Birth	None	None
194	08/16/2007 14:50	Active	What is the ZIP code of your birthplace?	Your Birth	None	None
193	08/16/2007 14:50	Active	What was the first street you lived on?	Your Birth	None	None
192	08/16/2007 14:50	Active	What state were you born in?	Your Birth	None	None
191	08/16/2007 14:50	Active	What city were you born in?	Your Birth	None	None

Showing Records: 1 - 12 of 12 [Sort ▼] [Select All] [Export] [Export Delete Script] [Delete] [Enable] [Disable]

2. To display only the category of questions you want to edit, in the Category list click the category you want and click Submit Query.
3. To display only questions with the type of registration validation you want to edit, in the Registration Validation list click the type you want and click Submit Query.
4. To display only questions with the type of answer logic hint you want to edit, in the Answer Logic Hint list click the type you want and click Submit Query.
5. To display only questions with the status you want to edit, in the Status list click the status you want and click Submit Query.
6. To find a specific question, in the Question ID box enter the ID of the question and click Submit Query.
7. To find a question by keyword, in the Question Keyword box enter the keyword and click Submit Query.
8. To find a question that was created or modified within a specific timeframe, click the calendar icons and select the From Date and To Date you want and click Submit Query.

9. To edit a question in the list, click the wrench icon to the left of the question you want to edit.
10. To delete, enable, or disable a question, select the checkbox to the left of the question and click the appropriate button above and below the list of questions.

### *To export questions*

1. On the Admin menu, point to KBA, point to Questions, and then click Export Questions.
2. Enter search parameters to find the questions you would like to export.
3. Select the questions you want to export then click Export.

### *To create a new question*

1. On the Admin menu, point to KBA, point to Questions, and then click Create New Question.

The Create New Question page appears.

2. Type the new question in the question field.
3. Click in the Category box and select the category of question you want.
4. In the Registration Validation list, click the type of registration Validation you want.
5. Click in the Status box and select the status you want.
6. In the Answer Logic Hint list, click the type of Answer Logic Hint you want. These hints help the answer logic function more successfully on some questions, date related questions for example.
7. Click Create.

The Question Detail page appears for the newly created question.

### *To edit a question*

You can activate, disable, and edit a question on the Question Details page. If a question is disabled, customers who have previously selected this question are not affected. If you edit a question, customers using that question will receive the updated question.

1. On the List Questions page, click the wrench icon next the question you want to edit.

The Question Details page appears.



2. Make the changes you want and click Save.

### To export questions

1. On the Admin menu, point to KBA, point to Questions, and then click Export Questions.

The Export Questions page appears.

ID#	Updated	Status	Question	Category	Registration Validation	Answer Logic Hints
202	08/15/2007 22:43	Active	What was your father's profession when you were born?	Your Birth	None	None
201	08/15/2007 22:43	Active	What is the holiday closest to your birthday?	Your Birth	None	None
200	08/15/2007 22:43	Active	Who was the US President when you were born?	Your Birth	None	None
199	08/15/2007 22:43	Active	How old was your father when you were born?	Your Birth	None	None
198	08/15/2007 22:43	Active	How old was your mother when you were born?	Your Birth	None	None
197	08/15/2007 22:43	Active	What is the name of the hospital you were born in?	Your Birth	None	None
196	08/15/2007 22:43	Active	What was your birth weight (pounds and ounces i.e. 7 lbs 11 oz = 711)?	Your Birth	None	None
195	08/15/2007 22:43	Active	What is the ZIP code where you grew up?	Your Birth	None	None
194	08/15/2007 22:43	Active	What is the ZIP code of your birthplace?	Your Birth	None	None
193	08/15/2007 22:43	Active	What was the first street you lived on?	Your Birth	None	None
192	08/15/2007 22:43	Active	What state were you born in?	Your Birth	None	None
191	08/15/2007 22:43	Active	What city were you born in?	Your Birth	None	None

2. Enter search parameters to find the questions you want to export.

3. Select the questions to you want to export and then click Export.

### To import questions

You can import Zip files of questions into the system. If you import questions that belong to a category not currently in the system, the category will also be imported. If you import a question with the same ID# as an existing question, the existing question will be overwritten.

1. On the Admin menu, point to KBA, point to Questions, and then click Import Questions.

The Import Questions page appears.

2. Click Browse and locate the Zip file of questions you want.

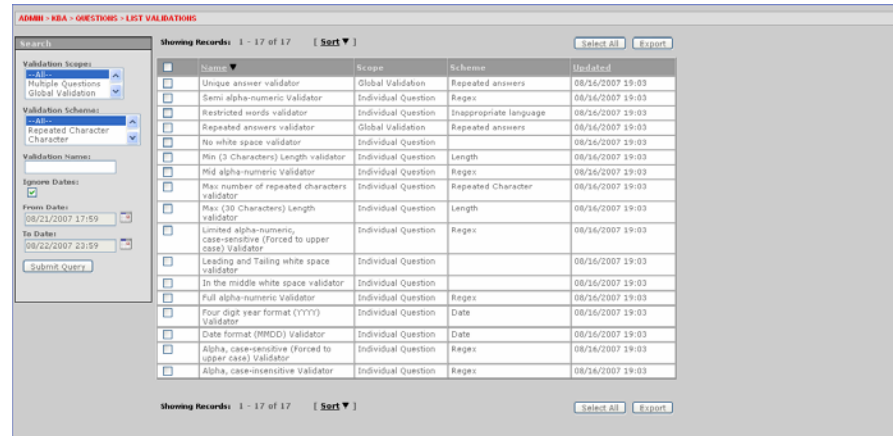
### 3. Click Import.

The Import Questions page appears with a list of the newly imported questions.

*To view a list of validations*

1. On the Admin menu, point to KBA, point to Questions, point to Questions, and then click List Validations.

The List Validations page appears.

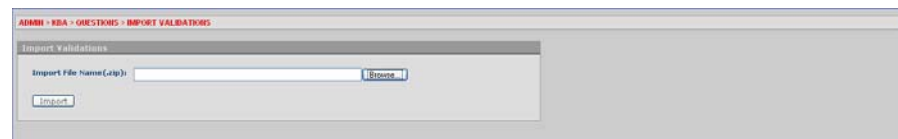


2. To display a specific validation scope, in the Validation Scope list, click the scope you want and click Submit Query.
3. To display a specific validation scheme, in the Validation Scheme list click the scheme you want and click Submit Query.
4. To find a validation, in the Validation Name box enter the name of the validation and click Submit Query.
5. To find a validation that was created or modified within a specific timeframe, click the calendar icons and select the From Date and To Date you want and click Submit Query.
6. To find all validations regardless of timeframe, select Ignore Dates.
7. To Export validations, select the checkbox to the left of the validations you want and click Export.

*To import validations*

1. On the Admin menu, point to KBA, point to Questions, and then click Import Validations.

The Import Validations page appears.



2. Click Browse and locate the Zip file of validations you want.
3. Click Import.

The Import Validations page appears with a list of the newly imported validations.

## Viewing Categories of Questions

You can search the question categories in the system based on various criteria.

*To view question categories*

1. On the Admin menu, point to KBA, point to Categories, and then click List Categories.

The Import Categories page appears.

ID#	Created	Updated	Status	Category	Questions
11	06/16/2007 14:50	06/16/2007 14:50	Active	Your Employment	8
10	06/16/2007 14:50	06/16/2007 14:50	Active	Your Birth	12
9	06/16/2007 14:50	06/16/2007 14:50	Active	Sports	13
8	06/16/2007 14:50	06/16/2007 14:50	Active	Significant Other	23
7	06/16/2007 14:50	06/16/2007 14:50	Active	Pets	9
6	06/16/2007 14:50	06/16/2007 14:50	Active	Parents, Grandparents, Siblings	29
5	06/16/2007 14:50	06/16/2007 14:50	Active	Disabilities	28
4	06/16/2007 14:50	06/16/2007 14:50	Active	Education	29
3	06/16/2007 14:50	06/16/2007 14:50	Active	Children	18
2	06/16/2007 14:50	06/16/2007 14:50	Active	Childhood	37
1	06/16/2007 14:50	06/16/2007 14:50	Active	Automobile	7

2. To display a specific question category, in the Category list, click the category you want and click Submit Query.
3. To display categories with a specific status, in the Status list click the status you want and click Submit Query.
4. To find a specific category, in the Category ID box enter the ID of the category and click Submit Query.
5. To find a category that was created or updated within a specific timeframe, click the calendar icons and select the From Date and To Date you want and click Submit Query.
6. To find all categories regardless of timeframe, select Ignore Dates.

## Configuring the Registration Logic

In the Registration Logic area you can manage and configure the registration for challenge questions and answers. To do so, you enter values for the Question Set generation and any global validations needed.

*To view and configure the registration for challenge questions and answers*

1. **On the Admin menu, point to KBA, point to KBA Logic, and then click Registration Logic.**

The Registration Logic page appears.

2. **To enter or change the values for the question set generation, enter a value in the appropriate field at the top of the page.**

You can specify the:

- Number of questions that a user needs to register
- Number of questions that appear on each menu
- The number of categories per menu

3. **To add global validations, in the Available Validations box, click the validation you want to add and then click Add.**

The validation appears in the Global Validations box.

4. **To delete a global validation, in the Global Validations box, click the validation you want to delete and then click Delete.**

5. **Click Save.**

## Configuring the Answer Logic

In the Answer Logic area you manage and configure the exactness required for challenge question answers.

*To configure the exactness required for challenge question answers*

You can configure the answer logic (fuzzy logic) algorithms on the Answer Logic page. The algorithms are divided into three categories: Common Abbreviations, Fat Fingering (accidentally pressing the nearest neighbor on the keyboard), and Phonetics.

1. **On the Admin menu, point to KBA, point to KBA Logic, and then click Answer Logic.**

The Answer Logic page appears.

	OFF	Low	Medium	High
Common Abbreviations:	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Keyboard Fat Fingering:	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>
Phonetics:	<input type="radio"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. **Click in the Authentication Type box and specify whether you want the configuration to apply to the Online challenge or CRS Phone Challenge.**

You can specify different settings for online and phone challenge.

3. **To change the level of answer logic used for a category, select Off, Low, Medium, or High: the lower the setting the higher degree of exactness required.**
4. **Click Save.**

## KBA Security Solution Guidelines & Recommended Requirements

These recommendations provide guidelines for implementing KBA authentication. They provide guidance to institutions for configuring and implementing custom enrollment and challenge procedures within the guidelines of best practices.

### Questions Guidelines

- No confidential data used in question.
- Answers are difficult to guess.
- Answers cannot be obtained from public sources.
- Questions that are applicable to general public.
- Answers are memorable/personally significant.
- Questions where answers can change over time are avoided.
- Questions cannot pertain to religion, politics, taboo subjects, etc.

### Answers Guidelines

- Answers must be at least 4 characters.
- No more than 2 answers can be the same during registration.
- Answers cannot have more than 2 repeating characters.
- Special characters are not allowed.
- Answers are not case sensitive.
- Extra white spaces are removed.
- Fuzzy logic implemented – degree configurable by client.

### Business/Security Recommended Requirements

- Unique pick set for each customer.
- Register 3-5 questions. i.e. 15 total questions to select from, 3 drop down menus of 5 questions each.
- Maximum of 2 questions from the same category in a drop-down menu.
- Maximum opt-out – i.e. 3 opt-out attempts before “force” registration.
- When challenged, the same question is to be presented until user responds correctly or question is reset by customer service agent.

## Glossary

**Action** – A response that is triggered by a rule, such as blocking a login after x login attempts within x period of time.

**Alert** – An alarm or signal that warns an organization to take action to deter potential fraud.

**Device** – A computer, PDA, cell phone, kiosk, etc.

**Group** – A collection of users, locations, devices, actions, or alerts.

**Location** – A city, state, country, IPs, or IP range.

**Model** – A set of rules that, when linked to a group, are used by Adaptive Risk Manager Online to evaluate the group member's activity at a specific runtime.

**Rule** – A rule defines an operation applied by the system to a specified user, device, or location group when a situation is detected that may indicate fraud.

**Score** – Score refers to the numeric scoring used to evaluate the risk level associated with a specific rule.

**Weight** – Weight refers to the multiplier value used to influence the total score.

**Policy** – A policy is a collection of models of the same type.

**Policy set** – A policy set is the collection of policies used to evaluate traffic in order to identify possible risk.

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