Logi Ad Hoc Reporting
System Administration Guide

Version 12
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INTRODUCTION

The Logi Ad Hoc System Administration Guide provides information to assist system administrators with the configuration and administration of an Ad Hoc instance.

This document covers the features and functionality available to the System Administrator through the Ad Hoc user interface. Configuring users, roles, some application and report settings, and the display and relationship aspects of the reporting database schema can be addressed through the Ad Hoc interface.

For information about configuring an Ad Hoc instance through the Management Console, please refer to the *Management Console Usage Guide*. Most of the reporting schema management, metadata management, and feature enablement for an Ad Hoc instance is handled through the Management Console.

Users, roles, and data objects can be managed programmatically using the *Logi Ad Hoc API*. The Management Console application's folders include an `ahInterfacesample` folder, which contains a sample application and supporting documentation about the API that contains information about configuring the metadata programmatically.

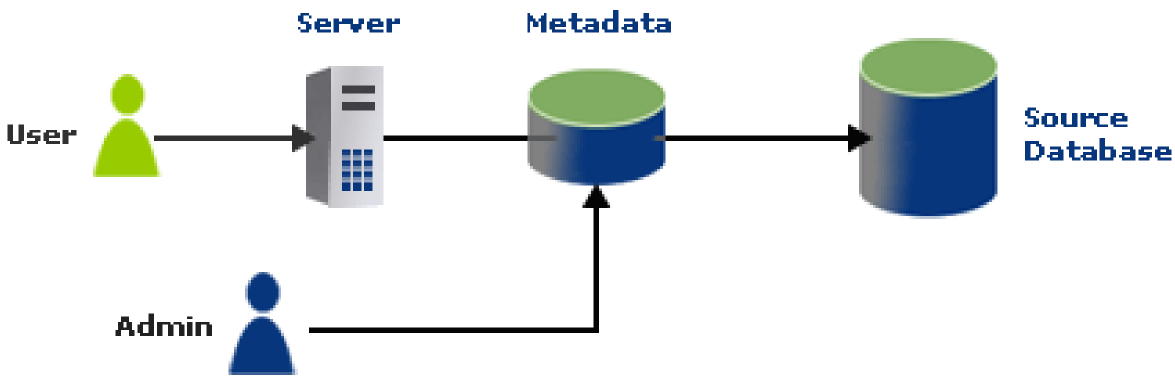
Target Audience

This guide is intended for the System Administrator and/or Database Administrator. The successful configuration of the application requires knowledge of database technologies. For additional technical documentation or support for this or any other Logi Analytics product, please visit our web site at http://www.logianalytics.com/support/.

Application Architecture

Ad Hoc uses a *metadata database* to store database schemas and security information. The metadata database is transparent to end-users building reports and makes the source database easier to work with. Objects in a database tend to have cryptic labels that are not meaningful for non-technical users building reports. System administrators can assign user-friendly labels to the objects in the database and users can work more easily with those data objects.

The Management Console gives system administrators the ability to store and manage the schema information for multiple reporting databases in the Ad Hoc metadata database. The metadata database only stores the schema for database objects, leaving the data intact within the reporting database. System administrators can work with the metadata database to define fixed parameters to filter records, create user-friendly object and column labels, and establish join relationships on the metadata.



Ad Hoc uses *role-based security*, storing role and user account information in the metadata database. System administrators create organizations, users, and roles, and specify role-based access rights to objects within the metadata database. Every user must belong to one organization, typically “Default”. The System Administrator can assign multiple roles to a single user.

Document Overview

This Guide presents brief descriptions of two administrative scenarios, the Configuration options, and Administrative features generally available to the System Administrator.

The Configuration options are grouped into four functional areas:

- User Configuration – covers the management of users, roles, and permissions, as well as organizations and session parameters
- Database Object Configuration – covers the management of the reporting database schema and the virtual views, catalogs, categories, and relationships related to the database objects
- Report Configuration – covers the management of scheduled and archived reports, report builder settings, and components that may affect the generation of reports. Cascading filters, presentation styles, and data formats fall into this latter category
- Application Settings – covers the administrative settings that affect the general behavior of the Ad Hoc instance. Settings that affect the general behavior of the instance, display and generation of reports, and managing password handling are covered

The Administrative features covered by this document include:

- Sharing Reports
- Linking Reports
- Permission Rights
- Special Settings

General User Interface

The Ad Hoc user interface has several standard graphical and functional features that provide a consistent utility pattern for the administrator. The following descriptions should be reviewed and understood so that the interface is clearer.

This discussion is specifically focused on the Configuration area of the Ad Hoc interface.

Icons

This action icon indicates that there are multiple actions that can be performed on the item. Hover your mouse cursor over the icon to display the list of possible actions.

This action icon indicates that there is only one action that can be performed on the item. Click the icon to perform the action.

This icon is typically used to close a dialog box window.

This is the typical drag-and-drop icon or handle. Click the handle, drag the item to the target location, and release the handle to reposition the item.

Click this icon to show brief help on the page

These arrows are typically used to move items between lists.

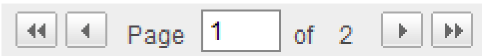
Click this icon to display a brief help panel for the associated attribute.

Clicking on this icon will display a calendar control as an alternative way to enter a date.

This pair of icons is typically used to move selected items up or down in a list.

This tab icon indicates that there are additional tabs to the right or to the left, respectively.

Controls



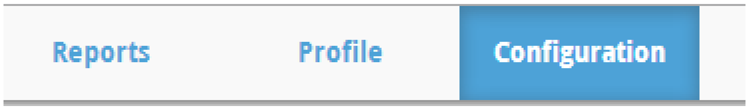
The paging controls shown above can be displayed, depending on configuration settings, at the bottom of the pages with lists of items. From left to right the icons are “first page”, “previous page”, “go to page number”, “next page”, and “last page”.

The search control shown above can be displayed, depending on configuration settings, on a list page. Enter text into the search text box and click the “find” button. The find button caption will indicate the type of item being searched. The search is a “contains” operator. Clicking on the “x” will clear the search box and present the full list of items.

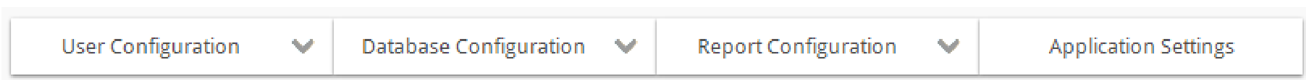
A “breadcrumb trail” of links, shown above, is displayed at the top of most pages in the Configuration area. The breadcrumb trail can be used to orient the user and navigate back through various pages. The Help icon will display brief help on the purpose and interactions available on the page.

Configuration

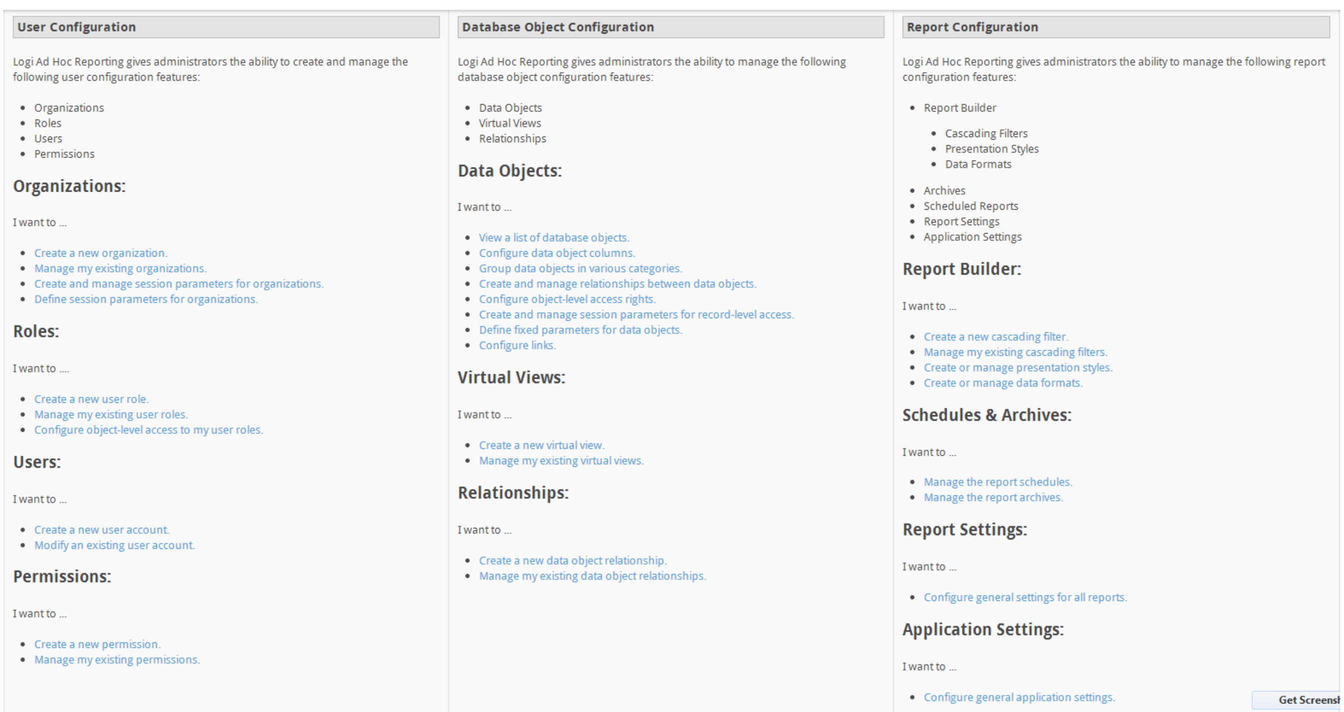
All of the configuration options available to the System Administrator in Ad Hoc are accessed through the **Configuration** button in the main menu at the top of the page.



The configuration pages are organized into those that affect users, database objects, reports and the application. When the configuration button clicked, the following tabs are displayed:



Each tab offers a drop-down list of related pages. In addition, text based links to the various related pages are displayed on the remainder of the page.



User Configuration

Logi Ad Hoc Reporting gives administrators the ability to create and manage the following user configuration features:

- Organizations
- Roles
- Users
- Permissions

Organizations:

I want to ...

- Create a new organization.
- Manage my existing organizations.
- Create and manage session parameters for organizations.
- Define session parameters for organizations.

Roles:

I want to ....

- Create a new user role.
- Manage my existing user roles.
- Configure object-level access to my user roles.

Users:

I want to ...

- Create a new user account.
- Modify an existing user account.

Permissions:

I want to ...

- Create a new permission.
- Manage my existing permissions.

Database Object Configuration

Logi Ad Hoc Reporting gives administrators the ability to manage the following database object configuration features:

- Data Objects
- Virtual Views
- Relationships

Data Objects:

I want to ...

- View a list of database objects.
- Configure data object columns.
- Group data objects in various categories.
- Create and manage relationships between data objects.
- Configure object-level access rights.
- Create and manage session parameters for record-level access.
- Define fixed parameters for data objects.
- Configure links.

Virtual Views:

I want to ...

- Create a new virtual view.
- Manage my existing virtual views.

Relationships:

I want to ...

- Create a new data object relationship.
- Manage my existing data object relationships.

Report Configuration

Logi Ad Hoc Reporting gives administrators the ability to manage the following report configuration features:

- Report Builder
  - Cascading Filters
  - Presentation Styles
  - Data Formats
- Archives
- Scheduled Reports
- Report Settings
- Application Settings

Report Builder:

I want to ...

- Create a new cascading filter.
- Manage my existing cascading filters.
- Create or manage presentation styles.
- Create or manage data formats.

Schedules & Archives:

I want to ...

- Manage the report schedules.
- Manage the report archives.

Report Settings:

I want to ...

- Configure general settings for all reports.

Application Settings:

I want to ...

- Configure general application settings.

Get Screensh

The *User Configuration* drop-down list presents links to the management pages for:

- *Organizations* – Every user must be a member of an organization. For most configurations, all users are members of the “Default” organization. Since that is the case for most configurations, the ability to have multiple organizations is initially disabled. When it’s disabled, the Organizations link is not shown in the drop-down list or in the text body of the page.

- *Roles* – Every user must have at least one role assigned to them. A user is granted the sum of the permissions of their assigned roles. A role is a collection of permissions.

- *Users* – A user’s logon ID, display name, email address, and password are identified on this page. A user’s roles may also be set on this page.

- *Permissions* – Permissions (also referred to as permission packages) are collections of rights. Eleven permission packages are distributed with Ad Hoc representing the most common grouping of rights. Every role must contain one or more permissions.

- *Session Parameters* - Session parameters are part of the .NET Framework and hold a specific value for the duration of the user session. Each session parameter is initialized with a specified value when users log into the application.

  If Organizations are enabled, the Session Parameters link appears under User Configuration since session parameters can be set/overridden at the Organization level. If not, the Session Parameters link appears under Application Configuration since the scope of session parameters is generally application wide.

The *Database Object Configuration* drop-down list presents links to the management pages for:

- *Categories* – These provide a mechanism for organizing and grouping data objects. For example, the System Administrator can identify all of the data objects related to sales into a category called “Sales”. End-users would then not have to sift through all of the possible data objects to locate the data related to sales. Categories are displayed as a special filter in the Report Builder.

- *Data Objects* – These are the source of data for a report. Data objects can be the Ad Hoc representation of tables and views found in a reporting database, the result of a virtual view definition, or the result of a catalog definition. Typical data object management includes showing or hiding columns, creating user-defined columns, specifying friendly names for the object and columns, defining object filters, and configuring automatic links from the columns.

- *Catalogs* – These are pre-defined collections of related data objects and columns, used to simplify data object selection by the end-user.

- *Virtual Views* – These are essentially pre-defined SQL Select statements. Typically, virtual views are used to relate multiple tables, perform data conversions, and reduce the number of data objects that the end-user sees.

- *Relationships* – These are the pre-defined join conditions between two data objects.

The *Report Configuration* drop-down list presents links to the management pages for:

- *Cascading Filters* - The term "cascading filter" refers to a series of user input drop-down lists where the value selected from the first list affects the values displayed in the second list. Cascading filters have no default values but instead rely on user input at runtime.

- *Presentation Styles* –These are display classes that must exist in the current default cascading style sheet. Presentation styles are used for conditional styling and labels added to a report.

- *Data Formats* – These are named display patterns for data. The format specification follows the Visual Basic format standards. Most of the common display formats are pre-configured in Ad Hoc and cannot be deleted.

- *Scheduled Reports* – This link allows the System Administrator to manage the existing report schedules from a central location and is only shown if scheduling is enabled for the Ad Hoc instance.

- *Archives* - This link allows the System Administrator to manage the report archives from a central location and is only shown if archiving is enabled for the Ad Hoc instance.

- *Report Settings* – These allow the System Administrator to control some of the functionality and behavior of the Report Builder and presentation of the generated reports.

The *Application Configuration* drop-down list presents links to the management pages for:

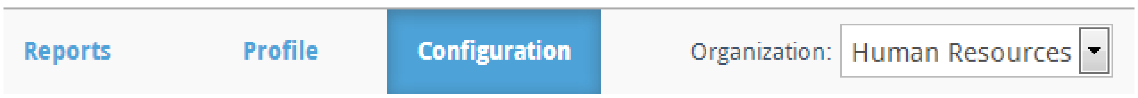
- *Application Settings* – These allow the System Administrator to control some of the functionality and behavior of the Ad Hoc user interface. The options are grouped into General, Configuration Menu, Report, and Password areas.

- *Session Parameters* - Session parameters are part of the .NET Framework and hold a specific value for the duration of the user session. Each session parameter is initialized with a specified value when users log in to the application.

  If Organizations are enabled, the *Session Parameters* link appears under *User Configuration* since session parameters can be set/overridden at the Organization level. If not, the *Session Parameters* link appears under *Application Configuration* since the scope of session parameters is generally application wide**.**

Note:
Users assigned to the System Admin role, or users with the Administration and/or Administer Organizations permissions assigned have access to the Configuration tab.

If more than one organization is configured for use in the Ad Hoc instance, the main menu can be adjusted to permit the System Administrator to filter or target their actions to the selected item in the list.



The Organization drop-down list allows system administrators to toggle between different organizations. System administrators can use the Organization drop-down list to limit the configuration scope or filter the report list for a specific organization. The users, archives, and scheduled reports are filtered by the Organization drop-down list.

User Configuration

Ad Hoc gives system administrators the ability to create and manage:

- Organizations
- Roles
- Users
- Permissions
- Session Parameters

Authentication is handled through user accounts. Every user that accesses Ad Hoc must have a valid user account. User accounts are grouped organizations. Each user account must belong to one and only one organization.

Organizations are treated as wholly-separate companies. Organizations don't share data or reports. Most customers rely on the "Default" organization and all users are members. Consequently, the ability to have multiple organizations must be specifically enabled through the Management Console. Refer to the *Management Console Usage Guide* for instructions on enabling the multiple organization capability.

Authorization is handled through roles and permissions. Ad Hoc provides over 75 different application rights to assign to users. System administrators can create custom permission packages or use the predefined permission packages, and then assign individual permissions to user roles. Roles may then be assigned to organizations. The roles assigned to a specific organization determine the roles *available* for members of that organization.

Note:
Unlike Microsoft Windows' authorization schema, assigning a role to an organization does not automatically assign that role to all members of the organization. Roles must be assigned individually to each user account.

Hint:
Ad Hoc security can be integrated with other authentication schema. Refer to the *Software Integration Guide* for more details.

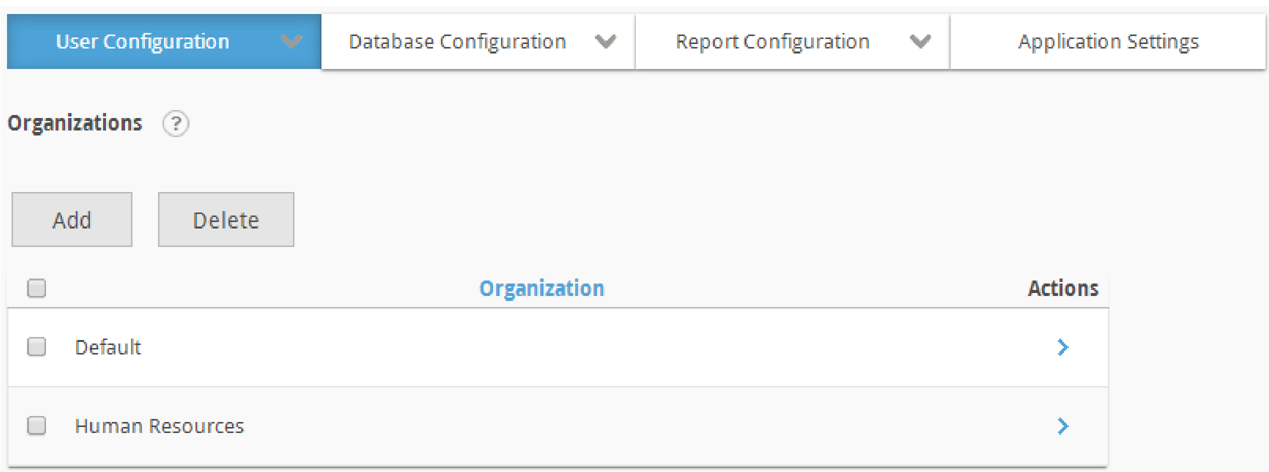
Organizations

Ad Hoc gives the System Administrator the ability to establish multiple “organizations”, which are collections of user communities. Every Ad Hoc user must be a member of one organization; unless otherwise assigned they are in the “Default” organization.

Organizations generally do not share user communities, reports, or data.

The ability to define multiple organizations must be enabled via the Management Console. Refer to the *Management Console Usage Guide* for details.

Select **Organizations** from the *User Configuration* drop-down list to display the *Organizations* configuration page:



The Default organization is created with every new installation of the application. System administrators can rename it, but it cannot be deleted. When attempting to delete the Default organization, all members are deleted, except for the System Administrator.

Click **Add** to display an empty *Organization* page.

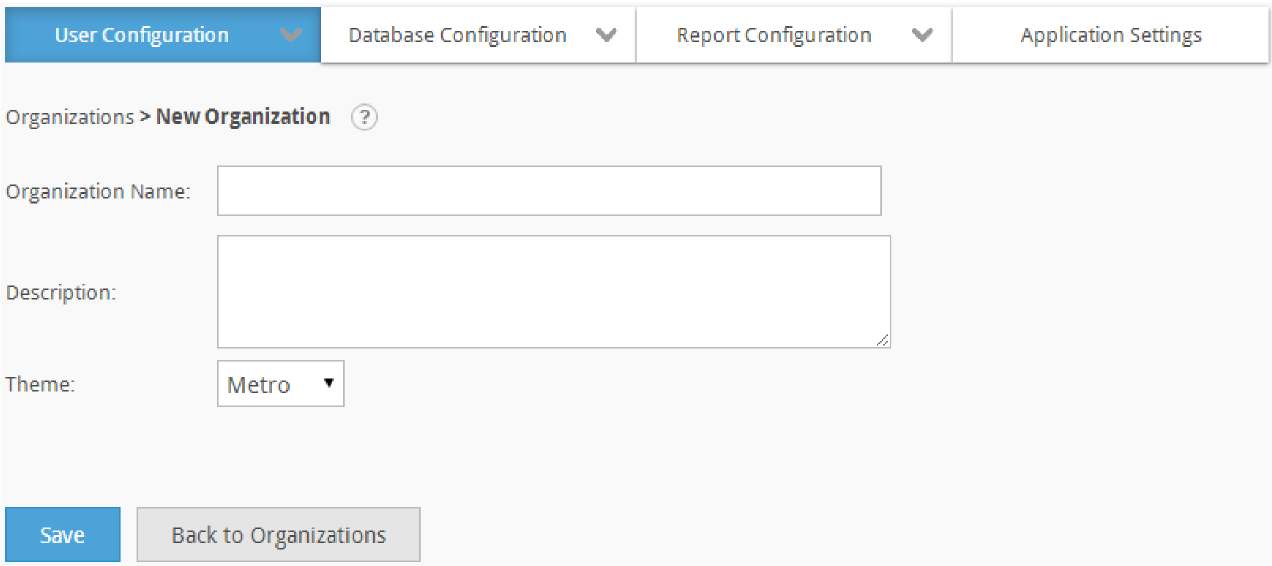
Click **Delete** to remove selected organizations. Organizations are selected by checking their checkboxes.

The icon indicates that more than one action can be performed on the organization. Hover your mouse cursor over the icon to display the available actions.

The available actions on the *Organizations* page are **Modify Organization, Delete Organization**, and **Set Session Parameters**. The **Set Session Parameters** action will only be displayed if a session parameter has previously been created for the application.

Adding an Organization

To add an organization, click **Add** and the *Organization* page will be displayed:



An *Organization Name* is required and must be unique. The *Description* of the organization is optional.

Click **Save** to save the new organization information.

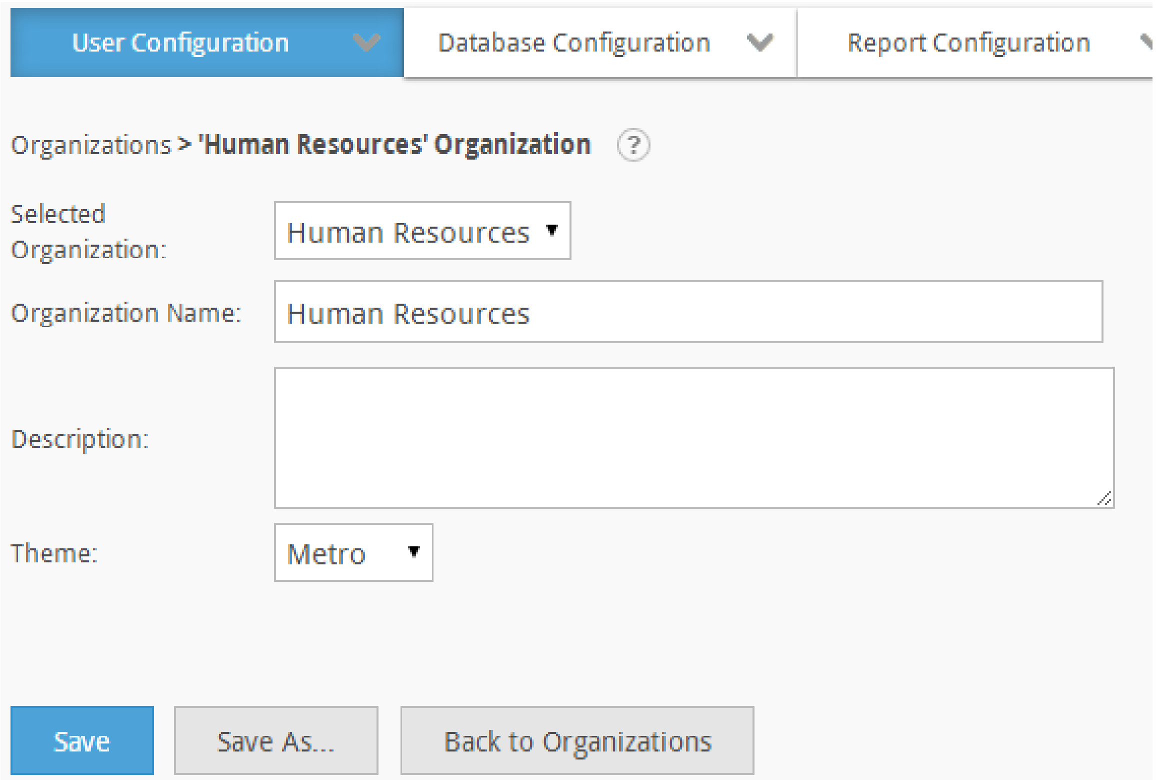
Adding an Organization Using "Save As"

The System Administrator can also create an organization by modifying an existing organization and then saving it with a new name, using the **Save As** button. This technique also copies the session parameters and values, if any, from the existing organization to the new organization.

Modifying Organizations

System Administrators can change the name, description, and theme of an organization at any time. Each organization must have a unique name.

To change an organization's information, click **Modify Organization**. The *Modify Organization* page will be displayed:



Modify the *Organization Name* and/or *Description* and click **Save**.

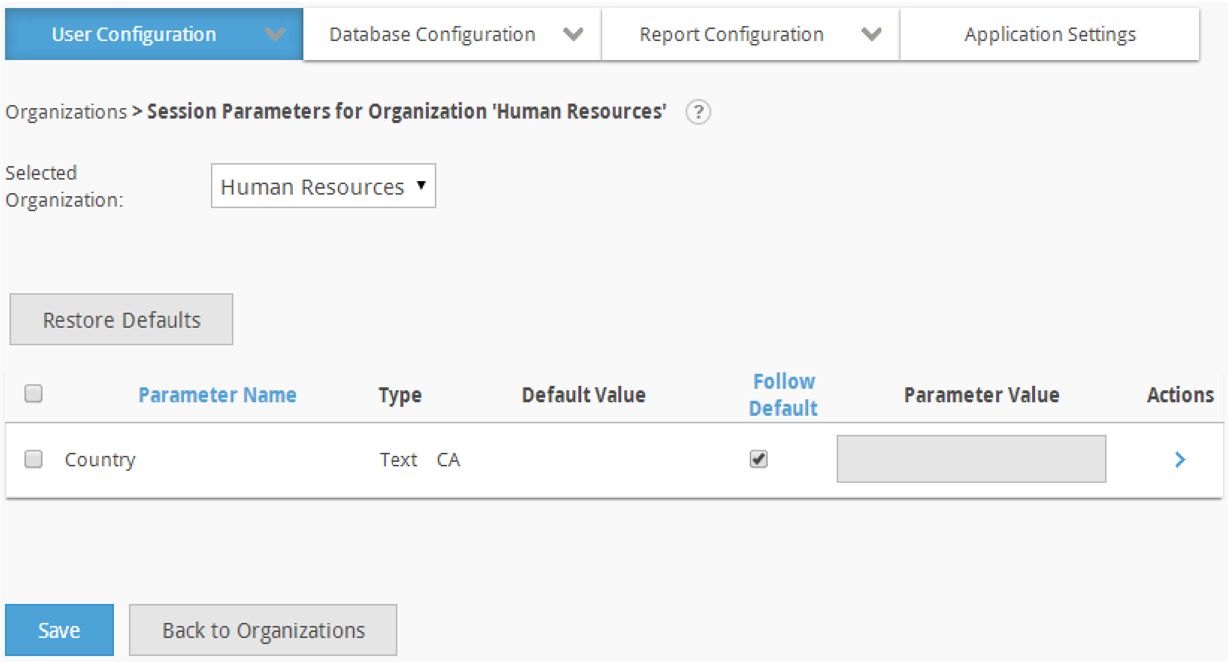
To save the edited information using a new *Organization Name*, click **Save As**, enter the new name, and click **OK**.

The Selected Organization drop-down list can be used to navigate through organizations (thereby avoiding having to use the Back to Organizations button and then selecting a different organization).

Setting an Organization's Session Parameters

System administrators can create multiple session variables called *session parameters* that can be used for display purposes or to filter data within a report or data object. Session parameters and values are initially defined with application scope. The session parameter values can be overridden for each organization.

To change the session parameter values for an organization, click the **Set Session Parameters** action for the organization. The *Organization Session Parameters* page will be displayed:



If Session Parameters have not been defined, the option to override the session parameter values for organizations will not be available.

Hint:
Refer to the *Session Parameters* chapter for help creating parameters and setting default values.

The *Selected Organization* identifies the organization that was the action target from the previous page. The drop-down list allows the Administrator to select other organizations and review or adjust their session parameters without having to return to the Organizations page.

The grid presents the session parameters that can be set for the organization. Click the *Parameter Name* or the *Follow Default* column header to sort the contents of the grid.

The **Restore Defaults** button provides a mechanism to reset all of the checked session parameters back to the values shown in the *Default Value* column.

The *Follow Default* checkbox specifies whether the parameter value should adopt the *Default Value*. This also allows the parameter value to be set “permanently”, meaning that changes to the *Default Value* will have no impact on the parameter value for the organization, if the *Follow Default* checkbox is unchecked.

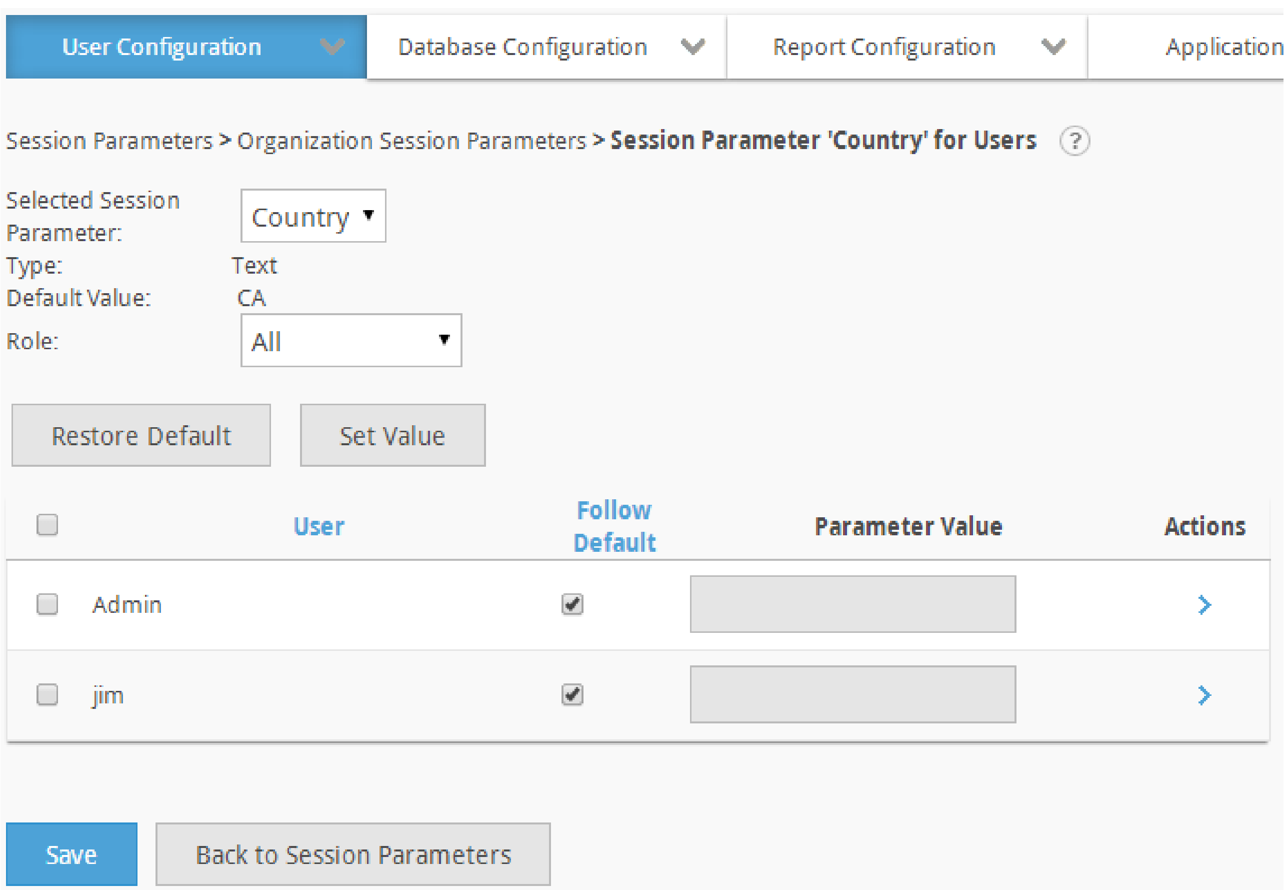
The grayed *Parameter Value* text boxes are not disabled. Their gray color is a visual cue that the value is the same as the default value and is expected to follow the default value. That means that if the default value changes, the organization will automatically pick up the new value.

The *Parameter Value* can be changed by either entering it directly into the text box or by selecting the **Modify** action and providing a new value. The parameter value may also be changed by selecting the **Restore Default** action.

If any *Parameter Value* is set it will be considered an override value and the *Follow Default* checkbox will automatically be unchecked.

Click **Save** to save the session parameter values for the organization.

An action that is available for each session parameter is **Set By User.** Clicking this action will present a page that allows the session parameter values to be set for all users in the organization:



The *Selected Session Parameter* value initially identifies the parameter that was specified when linking to this page. The drop-down list allows the Administrator to review and modify other session parameter values for the group of users.

The *Default Value* is the value that will be used for all users in the list unless the value is specifically overridden.

The *Type* value specifies one of the five session parameter data types; *date*, *number*, *numeric list*, *text*, and *textual list*.

The *Role* drop-down list can be used to filter the list of users. Initially the drop-down indicates "All" and lists all users in the Organization.

Click **Restore Default** to reset the session parameter value for all selected users back to the displayed Default Value. Users can be selected by checking their checkbox. All users can be selected by clicking the checkbox in the list header.

Click **Set Value** to open a dialog box to acquire a new value and then apply the value to all of the selected users.

The list of users can be sorted by clicking the *User* or *Follow Default* column header.

The *Follow Default* checkbox specifies whether the parameter value should adopt the *Default Value*. This also allows the parameter value to be set "permanently", meaning that changes to the *Default Value* will have no impact on the parameter value for the user, if the *Follow Default* checkbox is unchecked.

The grayed *Parameter Value* text boxes are not disabled. The gray color is a visual cue that the value is the same as the default value and is expected to follow the default value. That means that if the default value changes, the user will automatically pick up the new value.

The *Parameter Value* can be changed by either entering it directly into the text box or by selecting the **Modify** action and providing a new value. The parameter value can also be changed by selecting the **Restore Default** action.

If any *Parameter Value* is set, it will be considered an override value and the *Follow Default* checkbox will be automatically unchecked.

To change the parameter value, either enter a new value in the *Parameter Value* text box or hover your mouse cursor over the *Actions* icon and select **Modify** from the list of actions.

The **Modify** action will display a dialog box relevant to the type of the session parameter. "Date" session parameters will have a date picker control and "List" session parameters will present a list of values in the dialog box.

From the *Actions* icon, the session parameter value for the related user can be reset to the default value for the Organization by clicking **Restore Default**.

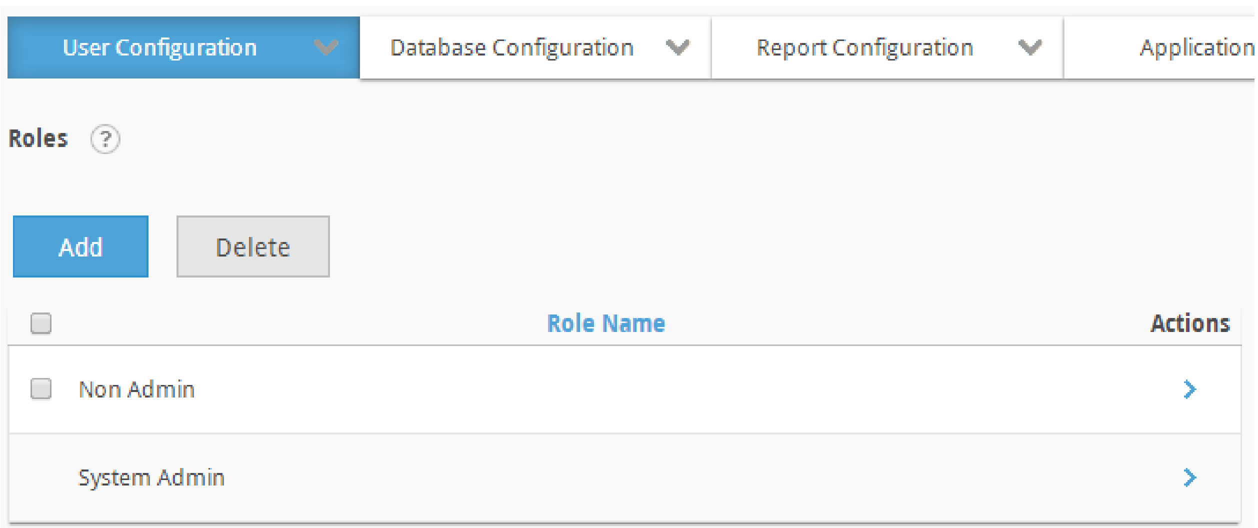
Click **Save** to save the session parameter values for the User.

Roles

Roles determine what a user is authorized to do within Ad Hoc. Access to features, databases, objects, and columns are all controlled by the rights given to the user through their assigned roles.

A *role* is comprised of one or more packages of rights, called *permissions* or *permission packages*. Roles are associated with organizations and then assigned to individual users within the organization.

Select **Roles** from the *User Configuration* drop-down list to display the *Roles* configuration page:



Click **Add** to display an empty *Role* page.

Click **Delete** to remove selected roles. Roles are selected by checking their checkbox.

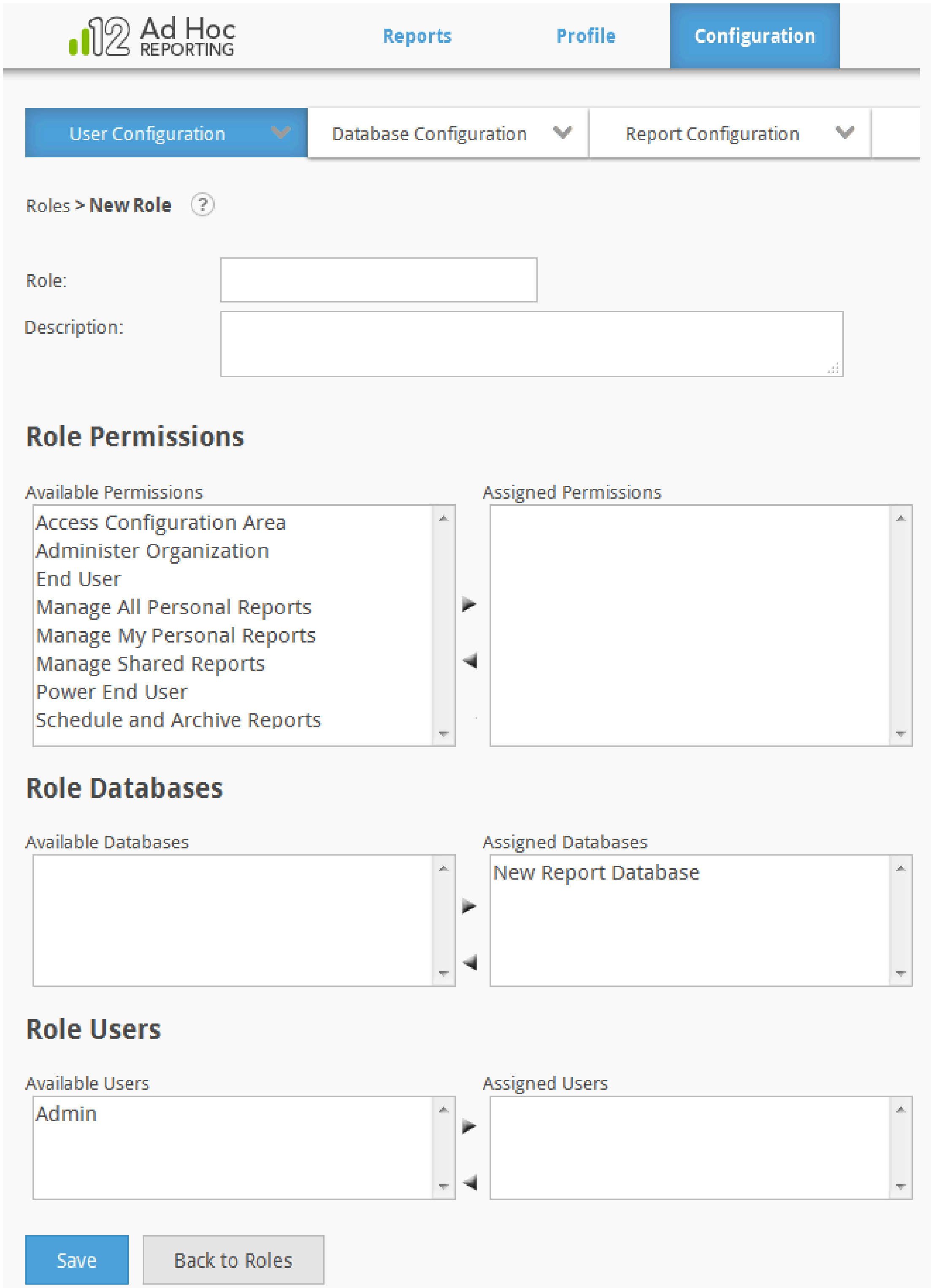
If a user is assigned multiple roles he will lose any role that the System Administrator deletes. If a user is assigned only one role and it's deleted, he no longer has access to the Ad Hoc instance. A user may not delete a role that is currently assigned to their own User account.

The › icon indicates that more than one action can be performed on the role. Hover your mouse cursor over the › icon to display the available actions.

The available actions on the *Roles* page are **Modify Role, Delete Role**, and **Set Data Object Access Rights**.

Adding a Role

To add a role, click **Add** and the *Role* page will be displayed:



The *Role* (name) value is required and must be unique. The *Description* of the role is optional. Assign *Permissions*, *Organizations*, *Databases*, and *Users* from their respective *Available* lists.

Click **Save** to save the new Role information.

Note:
Every role must have at least one organization assigned, typically the “Default” organization. If the Ad Hoc instance only has the “Default” organization defined, the Available/Assigned Organization control will not be shown.

Adding a Role Using “Save As”

The System Administrator can also create a role by modifying an existing role and then saving it with a new name, by using the **Save As** button. This technique copies the data object access right settings from the existing role to the new role.

Modifying Roles

System Administrators can change the *Role* name, description, and its assigned permissions, organizations, databases, and users.

To change the Role information, click its **Modify Role** action. The *Modify Role* page will be displayed.

Modify the *Role*, *Description*, or assignments and click **Save** to save the information.

To save the edited information using a new *Role* name, click **Save As**, enter the new name, and click **OK** to save the information.

Notes:
The Selected Role drop-down list can be used to navigate through roles and avoid using the Back to Roles button and selecting a role.

The *System Admin* role must have an assigned user named *Admin.*

Setting a Role's Data Object Access Rights

System administrators can control each role’s access to data objects. Access rights can be granted at the column-level or data object-level. You modify access rights to a data object by specifying access levels for each column of the object.

Note:
The *System Admin* role always has *Full* access rights to all data objects and columns within each data object.

The *Object Access Rights* page allows the System Administrator to assign access rights to specific data objects. By default, all roles associated with the current reporting database have *Full* access to all objects and columns in the current reporting database.

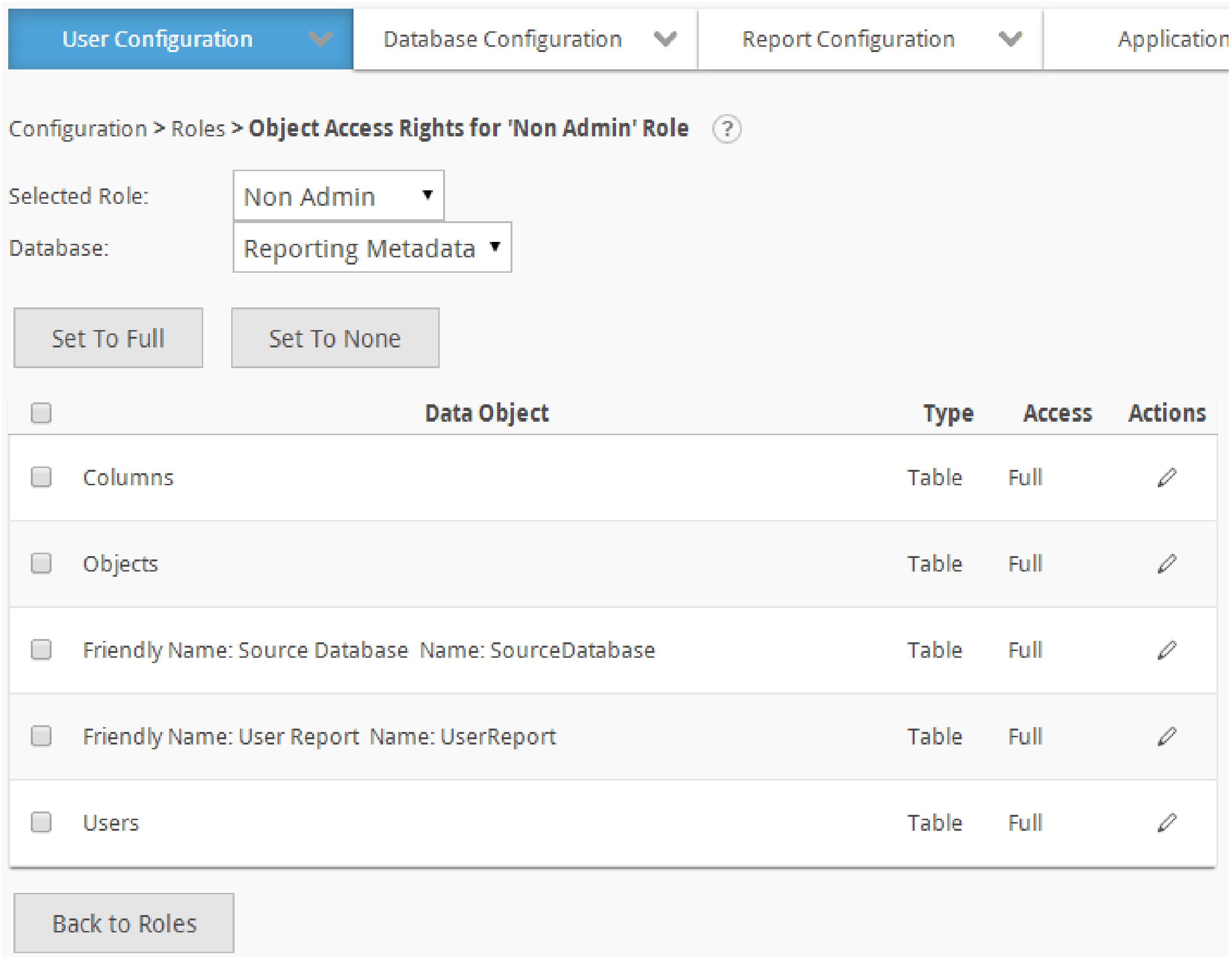
The three levels of access for data objects are:

- Full - All columns are accessible.
- Limited - Some columns are accessible.
- None - No columns are accessible

The two levels of access for individual columns are:

- Full - Column available for reporting
- None - No access

To change the access to columns, click the **Set Data Object Access Rights** action for the role. The *Object Access Rights* page will be displayed:



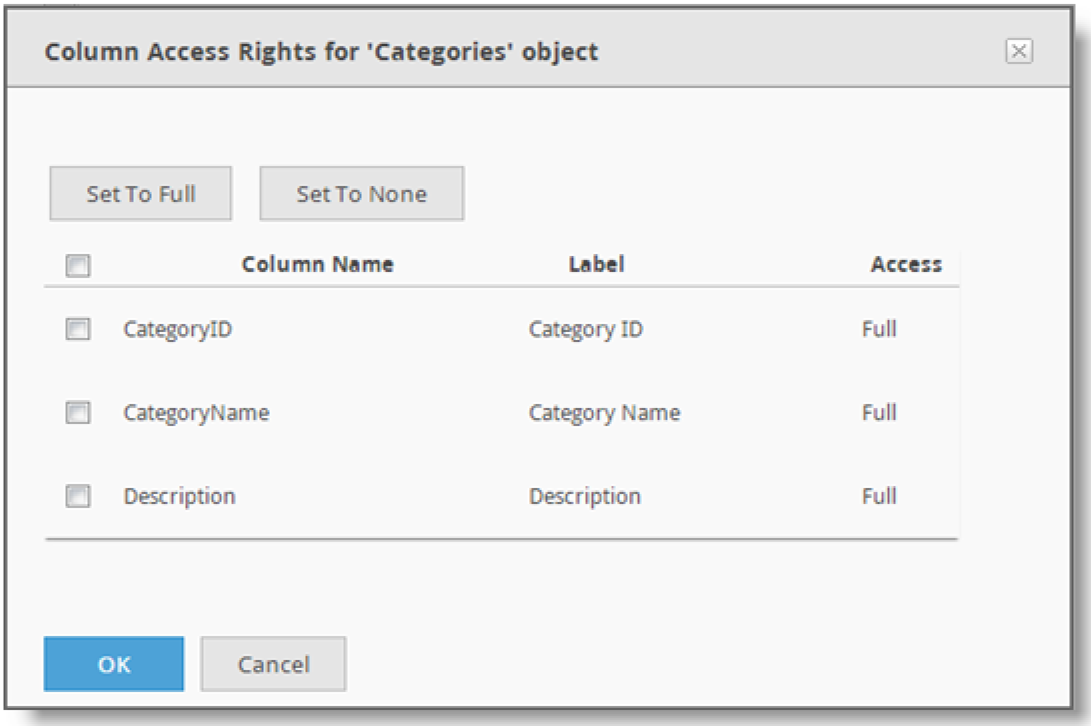
The *Database* drop-down list allows the System Administrator to select the pool of objects for the database.

The *Data Object* column lists all data objects. The *Type* column displays the object type and the *Access* column displays the access type for each data object.

The default access type for each data object and all columns is *Full*.

Column permissions for the System Admin role cannot be modified for any data object.

Click the icon to **Modify Column Access Rights** and display the **Column Access Rights** dialog box:



Using the checkboxes, select the desired columns and click **Set to Full** or **Set to None** to change the access rights for the columns for the respective role and data object.

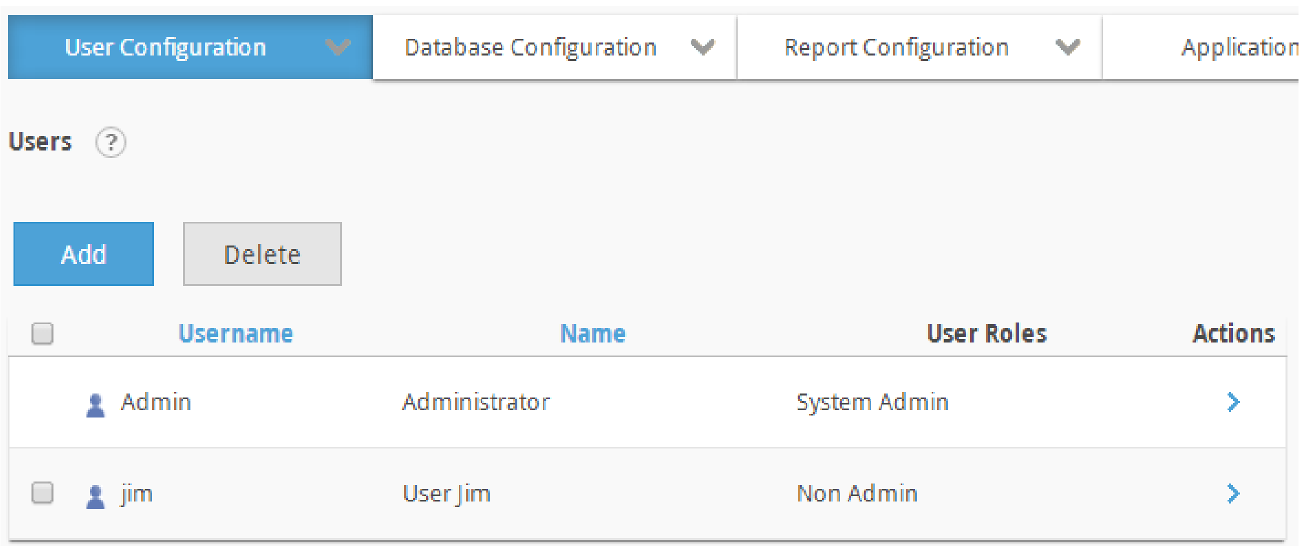
Click **Save** to save the configuration.

Hint:
You can quickly switch between roles by choosing the role from the drop-down list provided. Check one or more checkboxes and click **Set to Full** or **Set to None** to make fast access changes to objects in the metadata database. Click **Copy Permissions** and then choose a role to quickly duplicate permissions between user roles.

Users

A username and password are required to access the application. Administrators assign each individual a username and password. Users are members of a particular organization, typically “Default”, and have one or more assigned roles for access to specific data objects and application features.

Select **Users** from the *User Configuration* drop-down list to display the *Users* configuration page:



Hint:
Change the default password for the Admin user after installing the application. The default password is "password".

Click **Add** to display an empty *User* page.

Click **Delete** to remove the selected users. Users are selected by checking their checkboxes.

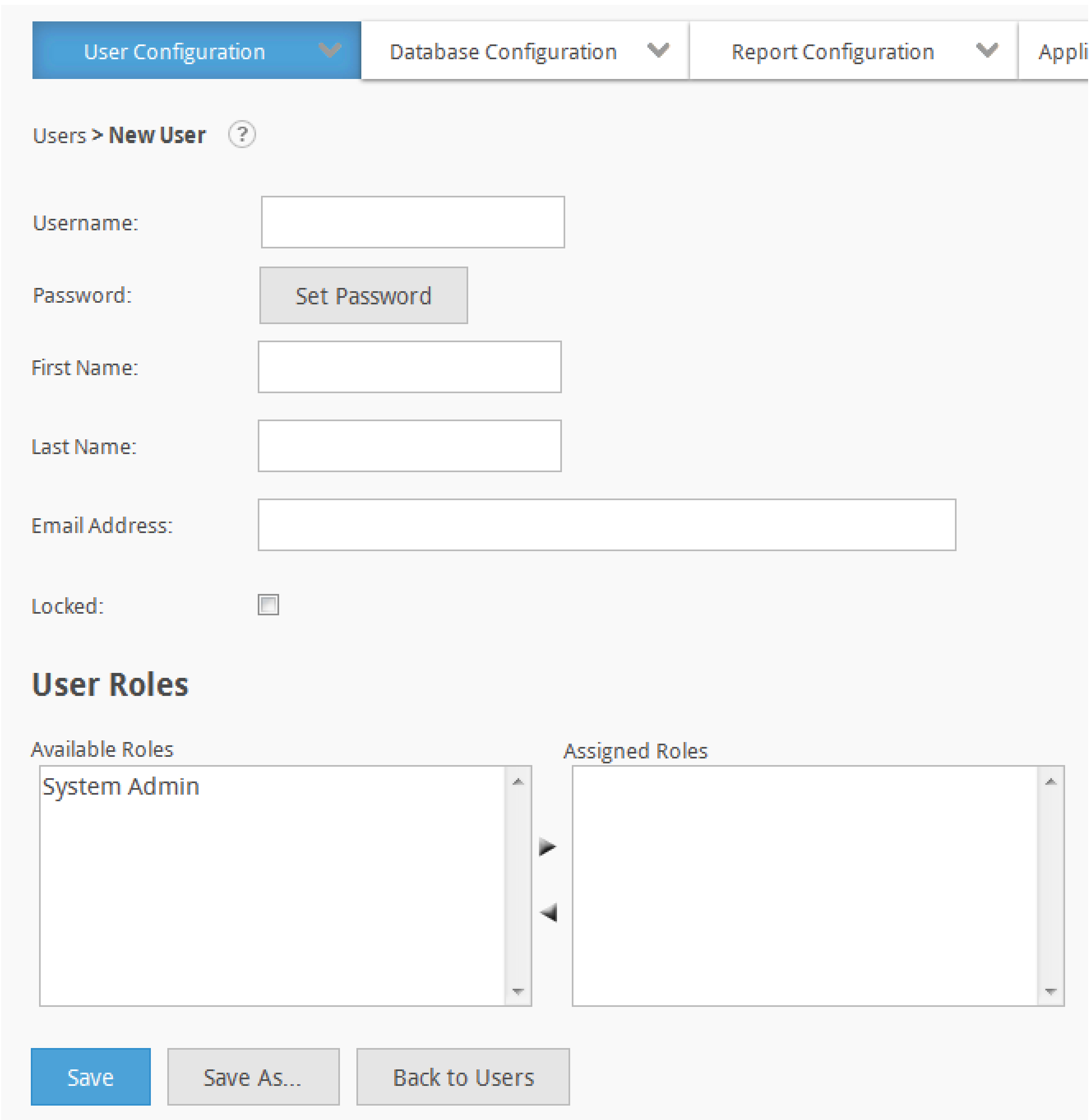
Deleting users from the application permanently erases any reports that user may have created, *except* for their shared reports. Any users created by the administrator can be edited and removed.

To deny a user access, we recommended that you lock their account or change their password instead of deleting their account.

The actions available for a User are **Modify User, Delete User**, and **Set Session Parameters.** Hover your mouse cursor over the › icon to show the available actions.

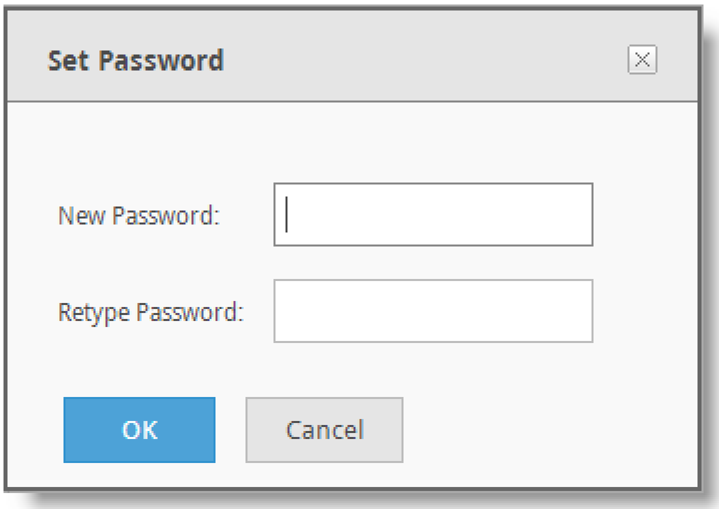
Adding a User

To add a user, click **Add** and the *User* page will be displayed:



A *Username* value is required and must be unique.

A *Password* must be set for each user. Click the **Set Password** button and complete the following dialog box:



After entering the password twice, click **OK** to save it.

Note:
The length, strength, and change frequency are configurable by the System Administrator through the Management Console and through Configuration/Application Settings in the instance.

The *First Name* and *Last Name* values are optional and are only used for display purposes.

The *Email Address* value is optional as well, however, an email address will be necessary for the delivery of scheduled reports.

Check the *Locked* checkbox to prevent this user from accessing the Ad Hoc instance.

Although *User Roles* do not have to be set when the user is created, at least one is required for the user to be able to access the Ad Hoc instance. Multiple roles can be assigned and will convey the cumulative rights of all of their assigned roles.

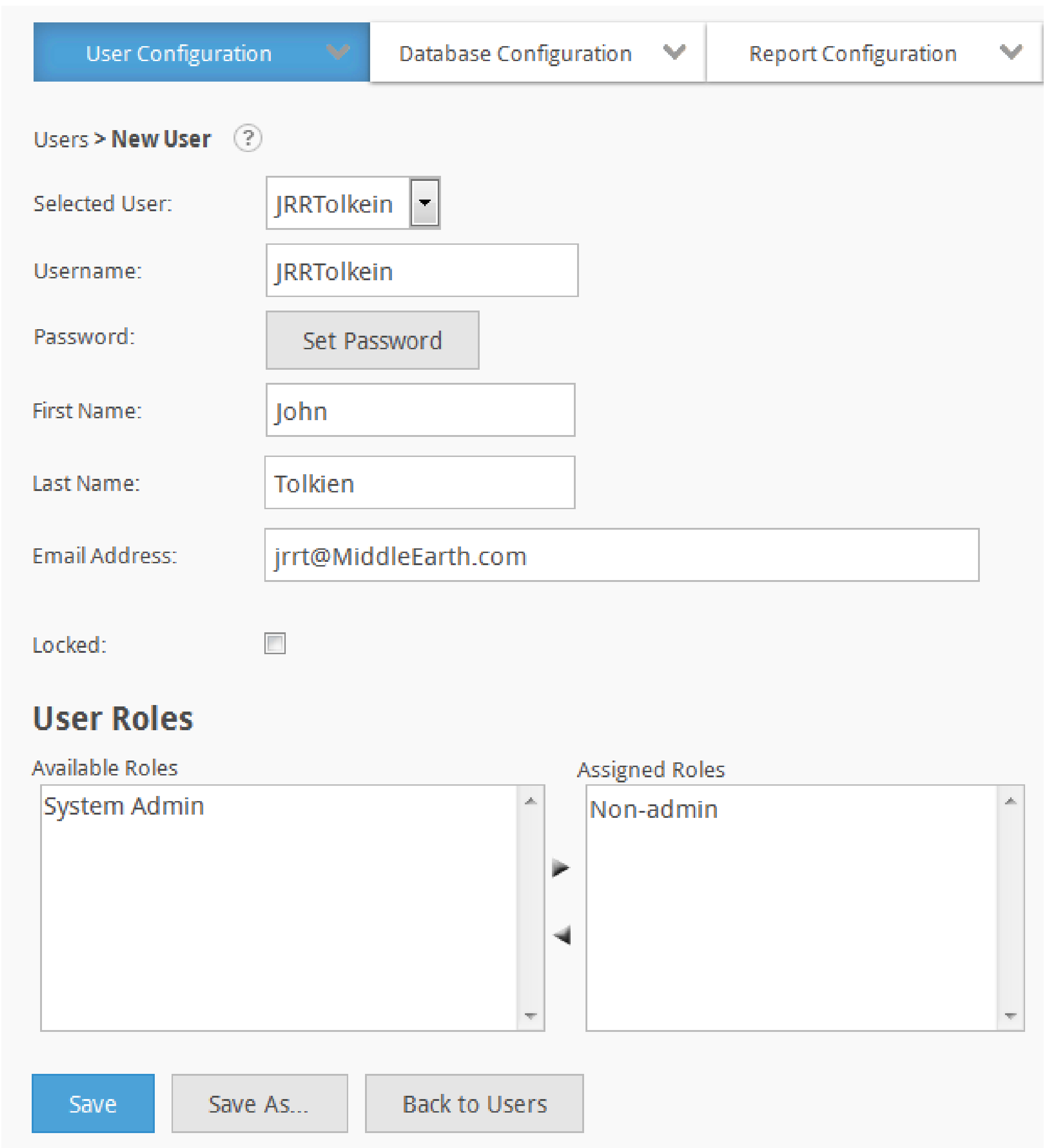
Click **Save** to save the new User information.

Adding a User Using “Save As”

The System Administrator can also create a user by modifying an existing user and then saving that record as a new user by clicking the **Save As** button.

Modifying Users

System administrators can change a user’s profile at any time. To change user information, click the **Modify User** action for the user. The *Modify Users* page will be displayed:



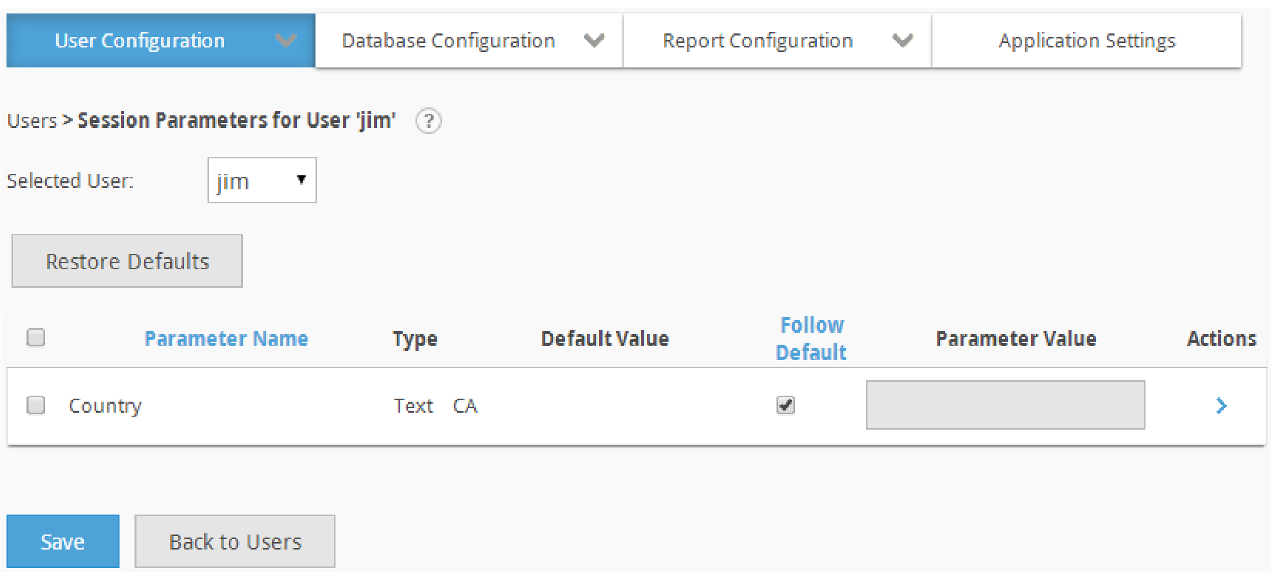
Modify the appropriate information and click **Save** to save the information.

To save the edited information using a new *Username*, click **Save As**, enter the new name, and click **OK** to save the information.

Note:
The **Selected User** drop-down list can be used to navigate through users in order to avoid using the **Back to Users** button in order to select a different user.

Set Session Parameters

To set session parameter values for an individual user, select the **Set Session Parameters** action. The following page will be displayed:



The *Selected User* drop-down list defaults to the user that linked to this page. It's a convenient way to change the focus of the page to a different user without having to go back to the previous page.

The grid presents all of the session parameters values defined for the selected user. Click the **Parameter Name** or **Follow Default** column headers to sort the contents of the grid.

The **Restore Defaults** button sets the values of the selected session parameters to the Default Value displayed in the grid.

Check the *Follow Default* checkbox to specify that parameter value should adopt the *Default Value*. This also allows the parameter value to be set "permanently", meaning that changes to the *Default Value* will have no impact on the parameter value for the user, if the *Follow Default* checkbox is unchecked.

The grayed *Parameter Value* text boxes are not disabled. The gray color is a visual cue that the value is the same as the default value and is expected to follow the default value. That means that, if the default value changes, the user will automatically pick up the new value.

The *Parameter Value* can be changed by either entering a value directly into the text box or selecting the **Modify** action and providing a new value. The parameter value may also be changed by selecting the **Restore Default** action.

If any *Parameter Value* is set it will be considered an override value and the *Follow Default* checkbox will automatically be unchecked.

Click **Save** to save the session parameter values for the user.

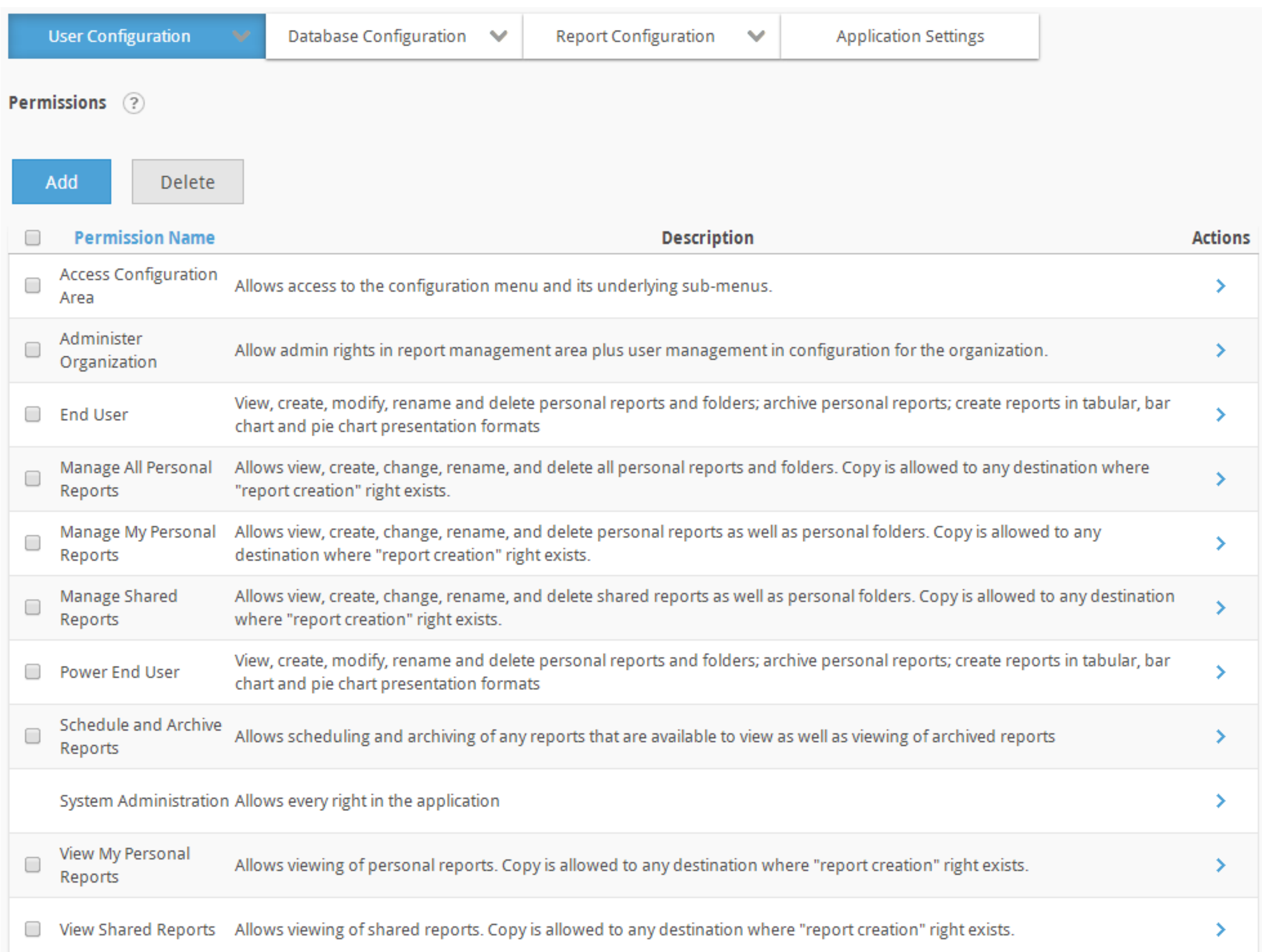
Permissions

Permissions are collections of related “rights”. Each right identifies a feature or function in Ad Hoc. There are over 75 rights that can be bundled into a permission, also known as a “permission package”.

One or more permissions are assigned to roles. Roles are then assigned to users.

The Permissions page allows the System Administrator to create and manage permissions in the application.

Select **Permissions** from the *User Configuration* drop-down list to display the *Permissions* configuration page:



Permission Name	Description	Actions
Access Configuration Area	Allows access to the configuration menu and its underlying sub-menus.	>
Administer Organization	Allow admin rights in report management area plus user management in configuration for the organization.	>
End User	View, create, modify, rename and delete personal reports and folders; archive personal reports; create reports in tabular, bar chart and pie chart presentation formats	>
Manage All Personal Reports	Allows view, create, change, rename, and delete all personal reports and folders. Copy is allowed to any destination where "report creation" right exists.	>
Manage My Personal Reports	Allows view, create, change, rename, and delete personal reports as well as personal folders. Copy is allowed to any destination where "report creation" right exists.	>
Manage Shared Reports	Allows view, create, change, rename, and delete shared reports as well as personal folders. Copy is allowed to any destination where "report creation" right exists.	>
Power End User	View, create, modify, rename and delete personal reports and folders; archive personal reports; create reports in tabular, bar chart and pie chart presentation formats	>
Schedule and Archive Reports	Allows scheduling and archiving of any reports that are available to view as well as viewing of archived reports	>
System Administration	Allows every right in the application	>
View My Personal Reports	Allows viewing of personal reports. Copy is allowed to any destination where "report creation" right exists.	>
View Shared Reports	Allows viewing of shared reports. Copy is allowed to any destination where "report creation" right exists.	>

Ad Hoc is distributed with 11 of the most common permission packages pre-defined. All but the System Administration permission package can be edited and deleted.

Click **Add** to display an empty *Permissions* page.

Click **Delete** to remove the selected permission. Permissions are selected by checking their checkboxes.

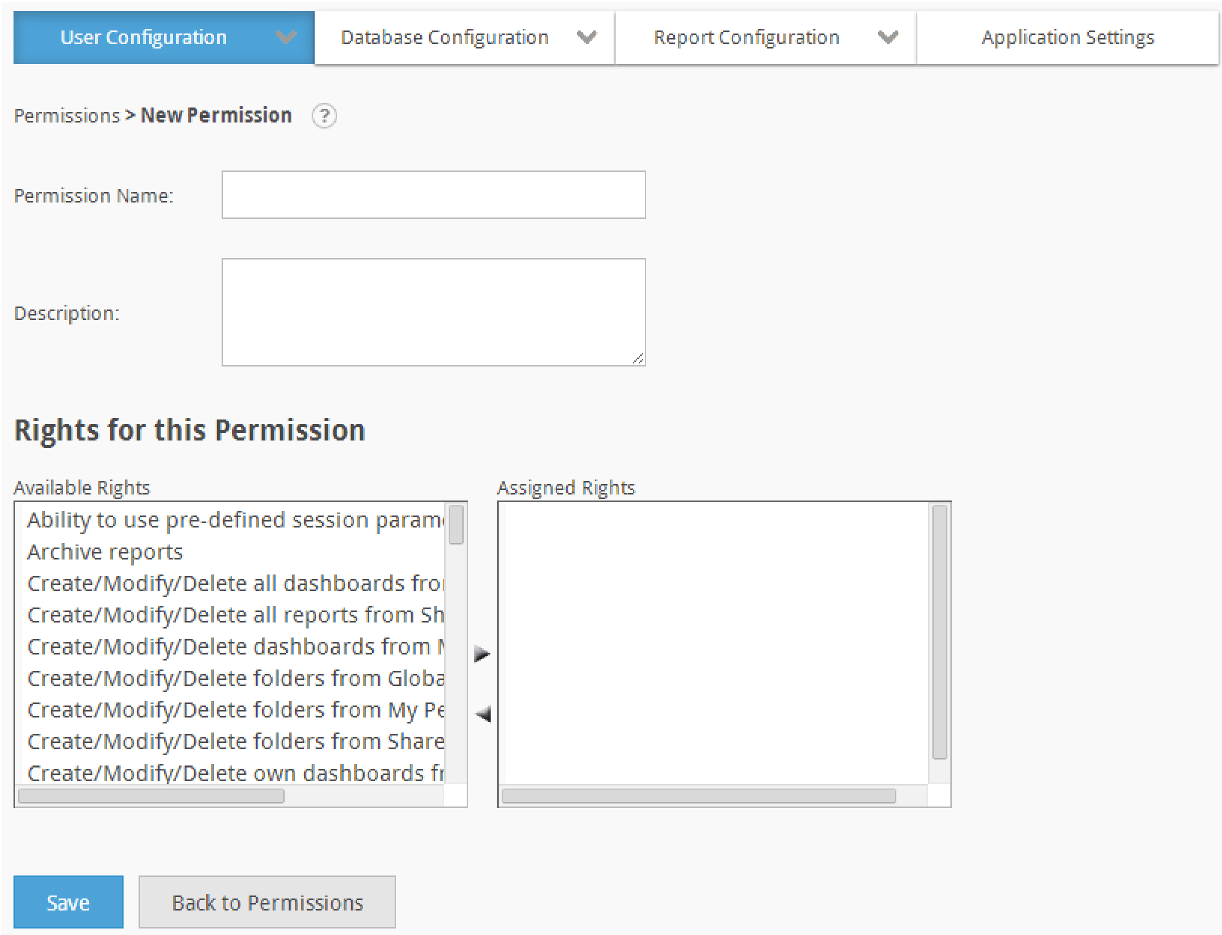
Notes:
The “System Administration” permission package contains all rights and may not be altered or deleted.

If the permission is assigned to any roles, that permission is removed from those roles when it is deleted.

Two actions are available for a Permission: **Modify Permission** and **Delete Permission.** Hover your mouse cursor over the › icon to show the available actions.

Adding a Permission

To add a permission, click the **Add** button and the permission page will be displayed:



A *Permission Name* value is required and must be unique. The *Description* value is optional. Assign rights to the permission from the list of Available Rights.

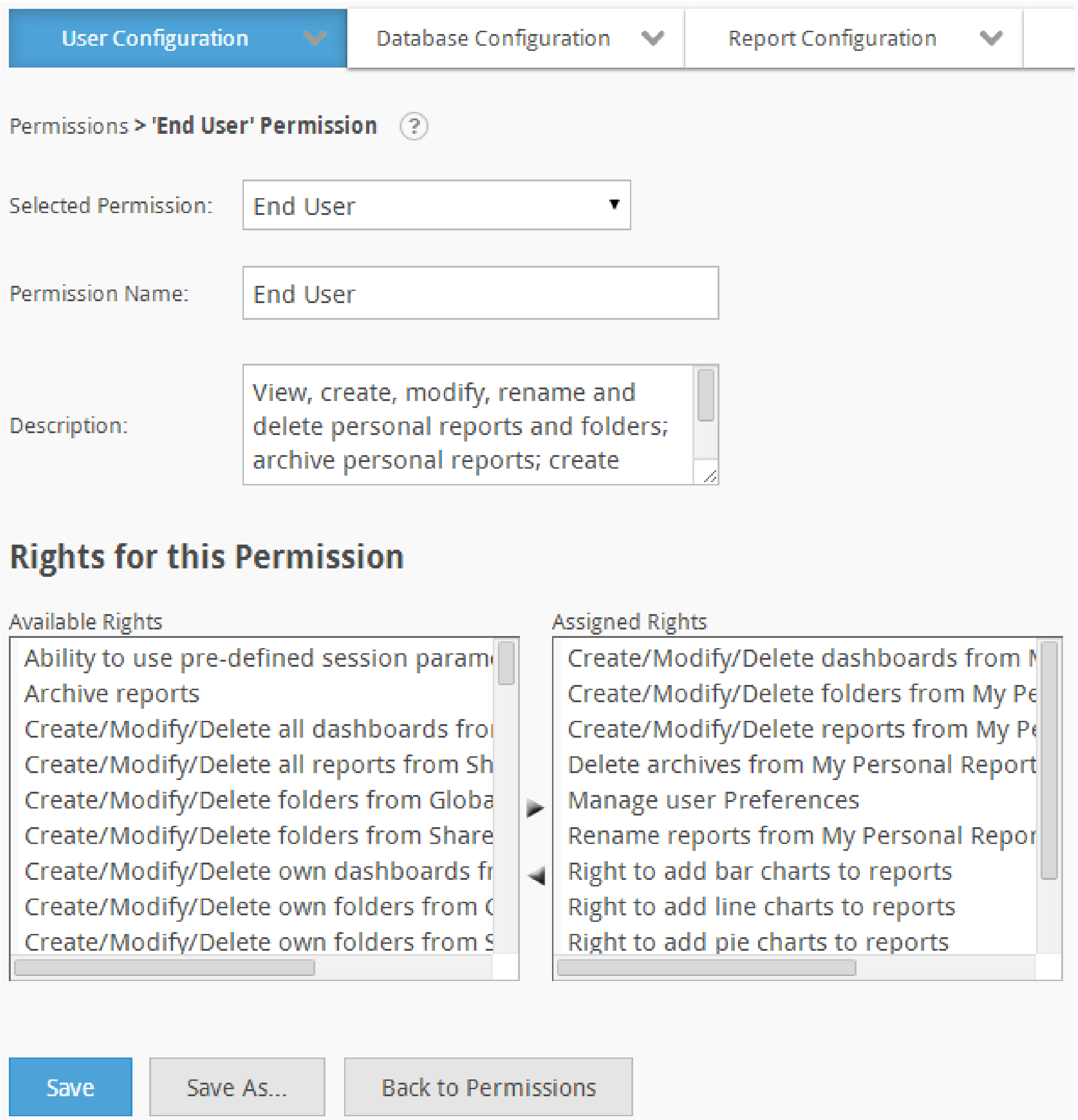
Click **Save** to save the new Permission information.

Adding a Permission Using "Save As"

The System Administrator can also create a permission by modifying an existing permission and saving it as a new permission by clicking the **Save As** button.

Modifying Users

To change permission information, click the **Modify Permission** action for the permission package. The *Modify Permissions* page will be displayed:



Modify the appropriate information and click **Save** to save the information.

To save the edited information using a new *Permission Name*, click **Save As**, enter the new name, and click **OK** to save the information.

Note:
The Selected Permission drop-down list can be used to navigate through permission packages and avoid using the Back to Permissions button and selecting a different permission.

Session Parameters

Session Parameters are documented in the Application Configuration chapter.

Session parameters are generally defined with “application” scope and are defined and documented under the *Application Configuration* options. By default, the link to the Session Parameter management pages is displayed in the *Application Configuration* drop-down list.

If the ability to specify *Organizations* is enabled, the session parameter’s values can be applied specifically to an organization. In this case, the scope of Session Parameters is closer to *User Configuration* and the link to the Session Parameter management pages is displayed in the *User Configuration* drop-down list.

Database Object Configuration

Ad Hoc gives system administrators the ability to configure the following database objects:

- Categories
- Data Objects
- Catalogs
- Virtual Views
- Relationships

A *Category* is a collection of data objects. Categories are used as a quick filter to narrow the list of data objects that the end-user initially has to choose from when creating a report.

A *Data Object* is equivalent to one table or view from a source database. Data object names come from the associated source database, but System Administrators can give data objects user-friendly names and descriptions to help users building reports. Both object and record-level access rights to data objects can be specified.

A *Catalog* is a type of data object that is a pre-defined set of related data objects and columns. Catalogs are created by the System Administrator to eliminate the need for end-users to traverse relationships to select data for reporting. Catalogs are an Ad Hoc feature that prevents end-users from having to know and understand that data architecture before creating reports.

A *Virtual View* is a data object created by the administrator from existing tables and views within a particular source database. The application stores the virtual view in its metadata database and makes it available to users building reports. Unlike other data objects available for reporting, virtual views exist only in the application metadata. Virtual views are an Ad Hoc feature that prevents end-users from having to know and understand that data architecture before creating reports.

Relationships can be established between any two database objects. System Administrators have the ability to define these relationships in order to create reports from multiple data objects. Relationships created in the Ad Hoc instance exist only in the metadata.

Each of these data objects are discussed in more detail below.

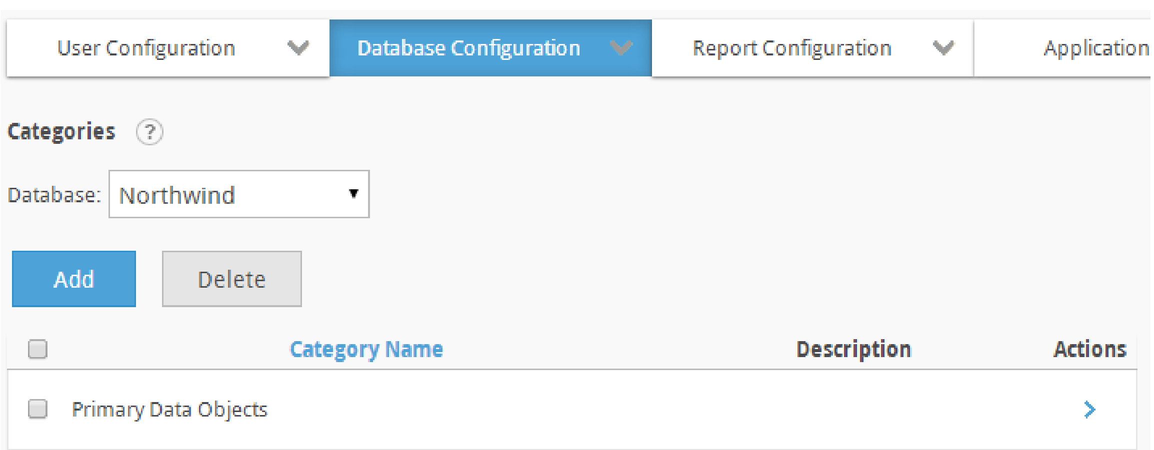
Categories

Categories are a convenient mechanism for grouping logically-related data objects, making them easier to find. *Categories* are implemented as a filter in the Report Builder data selection dialog boxes.

Essentially the System Administrator creates one or more categories and assigns data objects to the category. Data objects may appear in more than one category since many data objects are common to different reporting needs (e.g. the States data object can be required to create reports on the Sales data as well as the Human Resources data).

Note:
The System Administrator may also create the Categories by using the Management Console. Refer to the *Management Console Usage Guide* for details.

Select **Categories** from the *Database Configuration* drop-down list to display the *Categories* configuration page.



The **Database** drop-down list acts as a filter for the Category list. Only Categories related to the selected database will be displayed. If only *one* reporting database has been configured for this Ad Hoc instance, the **Database** filter will not be shown at all.

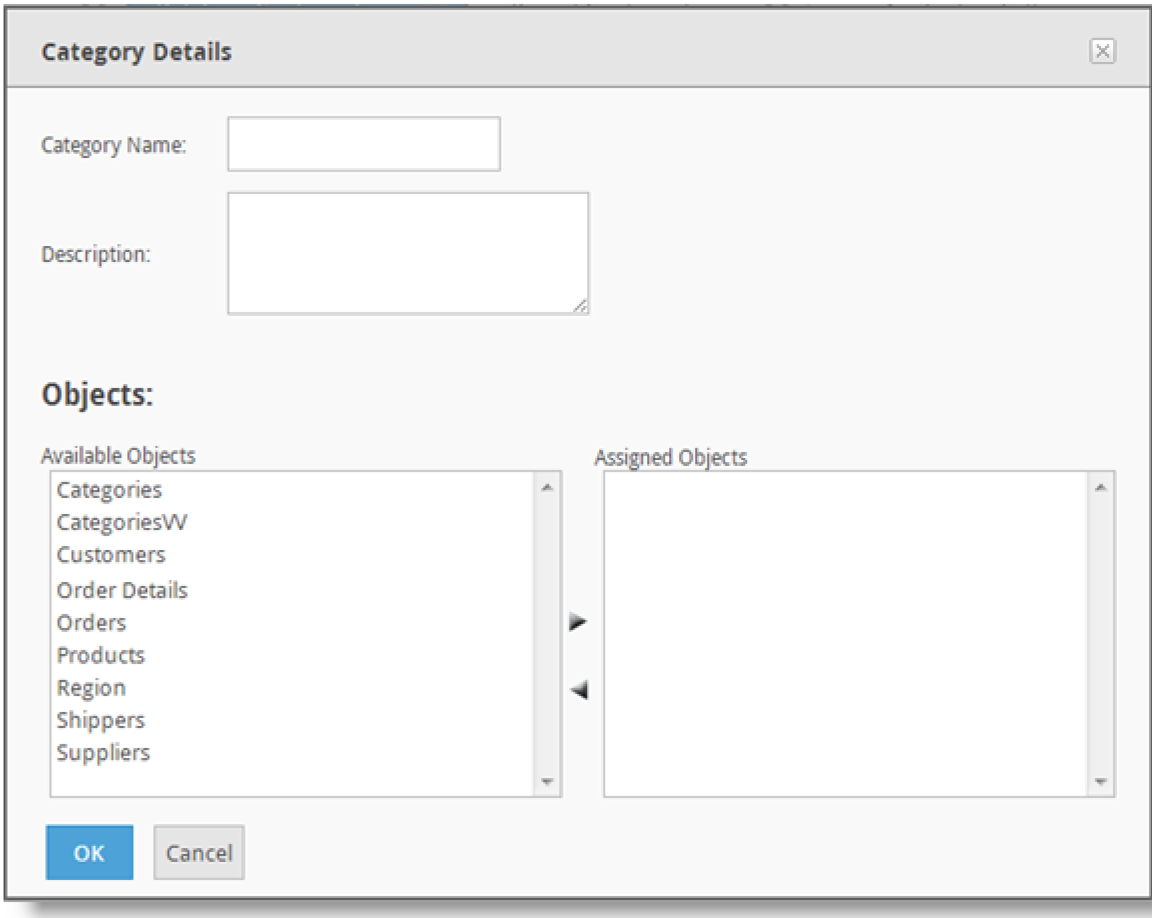
Click **Add** to display an empty *Category* page.

Click **Delete** to remove the selected category. Categories are selected by checking their checkboxes.

Two actions are available for a Category: **Modify Category** and **Delete Category.** Hover your mouse cursor over the › icon to show the available actions.

Adding a Category

To add a category, click the **Add** button and the category dialog box will be displayed:

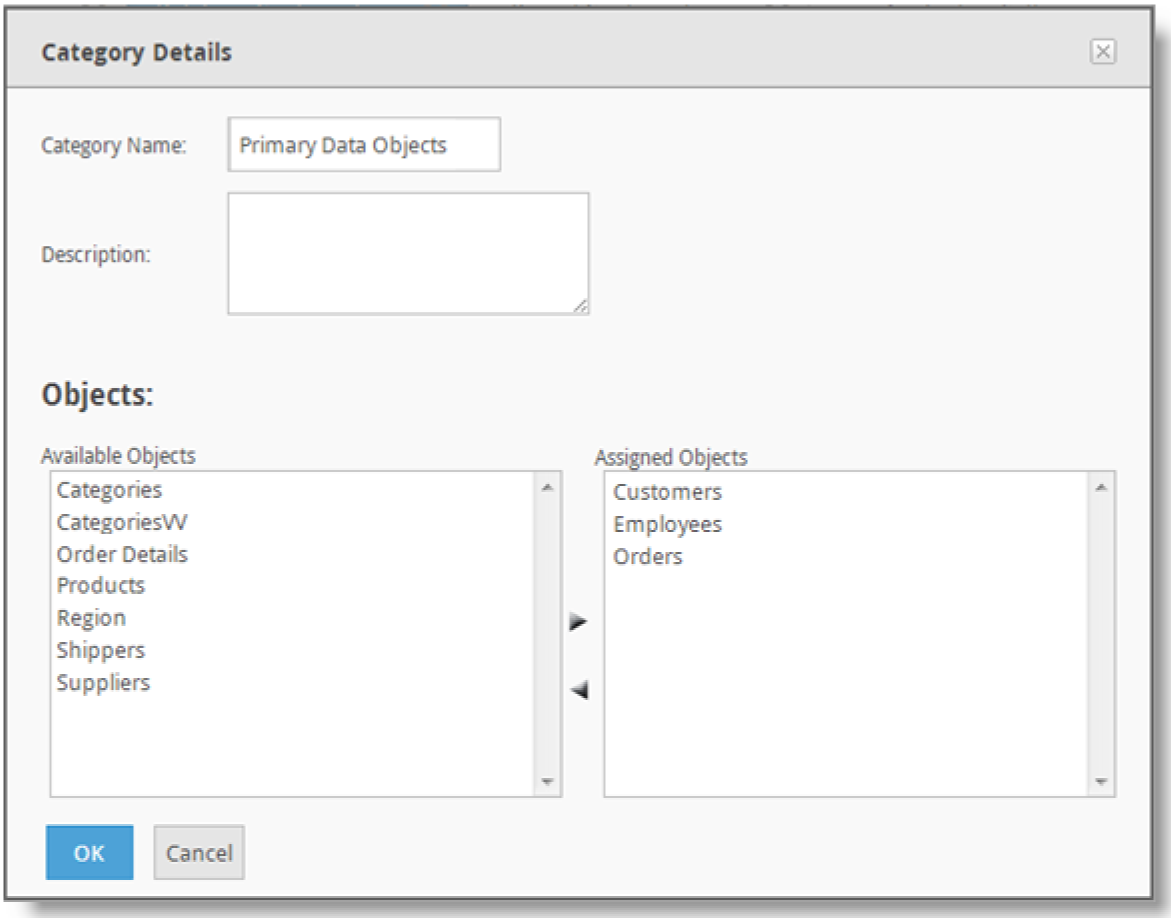


A *Category Name* is required and must be unique. The *Description* is optional. Assign data objects to the category from the list of Available Objects.

Click **OK** to save the new Category information.

Modifying Categories

To change category information, click the **Modify Category** action for the category. The *Category Details* dialog box will be displayed:



Modify the appropriate information and click **OK** to save the information.

Data Objects

Data Objects are core to the Ad Hoc reporting architecture. A data object is simply a collection of related columns whose definition resides in the metadata database.

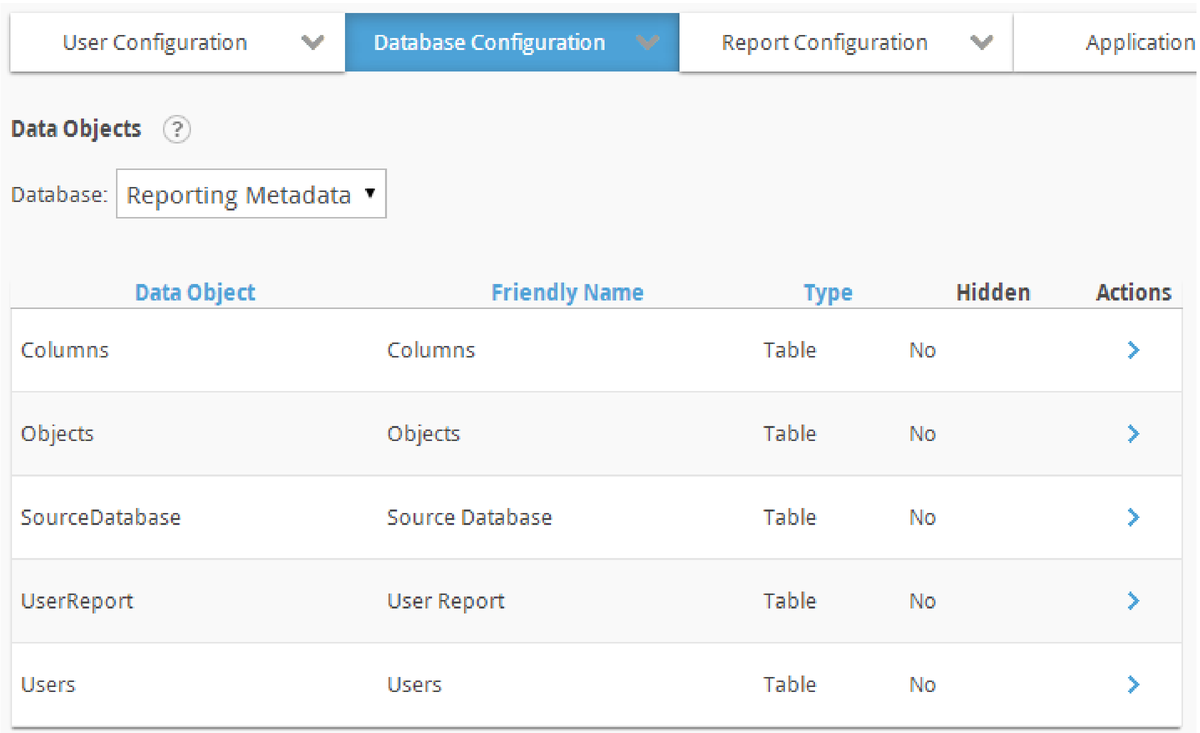
Most data objects are created by importing all or part of a schema from a reporting database using the Management Console. The database table and view definitions are ported into the Ad Hoc metadata database.

Data objects may also be created by defining virtual views and catalogs within the Ad Hoc interface. A virtual view is a SQL SELECT statement that identifies the columns, tables, relationships, and data transformations necessary for reporting. A catalog is a pre-defined set of related data objects and columns. Virtual views and catalogs only exist in the metadata database.

The concept of Data Object definitions existing in the metadata database is what allows the System Administrator to customize the end-user experience and reduce the database-specific technical knowledge required to produce complex reports. User-friendly names, pre-defined relationships, user-defined columns, and data object-level filters are all designed to benefit the end-user.

The Data Objects page allows the System Administrator to customize data objects in the application. An object’s label, column-formatting options, column descriptions, access rights, fixed parameters, user-defined columns, and relationships can all be modified.

Select **Data Objects** from the *Database Configuration* drop-down list to display the *Data Objects* configuration page:



Information on the page can be sorted by clicking the *Data Object, Friendly Name,* or *Type* column headings.

The icon indicates that more than one action can be performed on the data object. Hover your mouse cursor over the icon to display the available actions.

The possible actions for a data object are:

Modify Data Object – Change the object's friendly name, description, visibility to the end-user, display order, default format, default alignment, and hidden status. In addition, you can view the dependencies for each column of the object. User-defined columns may also be defined.

Set Relations – Define relationships between the selected object and other data objects and view the relationship's dependencies.

Set Data Object Access Rights – Modify the data object access rights for each defined role associated with the current reporting database.

Set Parameters – Specify one or more "fixed parameters" for the data object. Fixed parameters are filters applied to the data object in every occurrence of its use.

Data objects based on stored procedures may have input parameters. Input parameters are established when the procedure is imported into the metadata database and may only be removed by removing the data object. Input parameters can be edited, implying that the value can be supplied by the end-user when a report that is based on the procedure is executed.

Set Links – Configure links from columns to a URL or report.

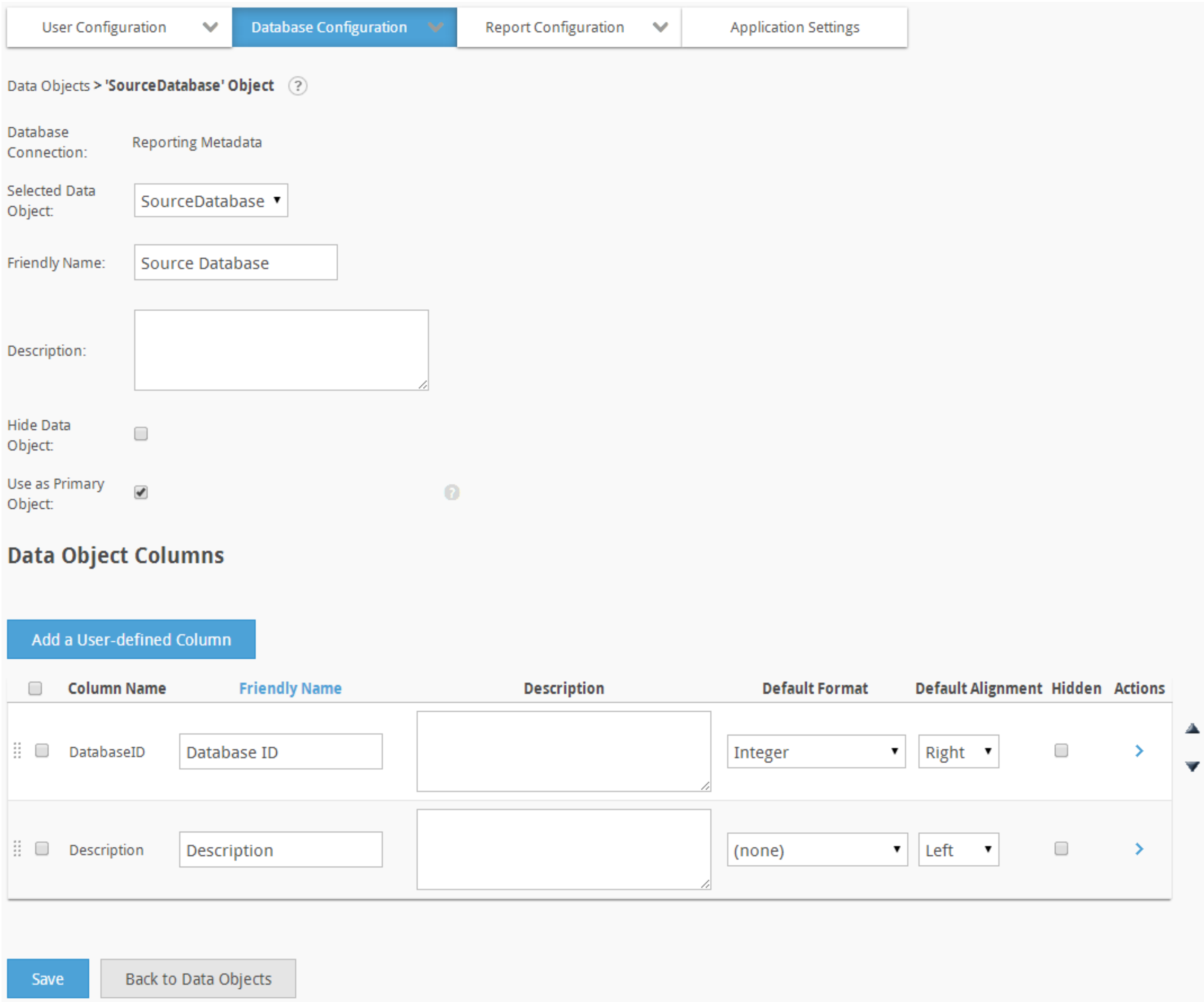
View Dependencies – Displays information about the content or usage of an item. This information can be very helpful to System Administrators who need to know usage information.

Modifying Data Objects

The Modify Data Object page allows the System Administrator to:

- Change the friendly name, description, and visibility of the data object
- Change the friendly name, description, default format, default alignment, and visibility of columns
- Change the presentation order of the columns in the Report Builder
- Manage user-defined columns
- View the dependencies related to a column

Hover your mouse cursor over the › icon to display the available actions and click the **Modify Data Object** option. The following page will be displayed:



The data object's *Friendly Name* and *Description* specified here are displayed in the Report Builder when the user is selecting the data for a report.

The *Hide Data Object* checkbox specifies whether the data object is visible when the user is selecting data for a report. System administrators can avail themselves of other mechanisms to provide this data, such as Catalogs or Virtual Views, and may not want users accessing the data object directly.

A column's *Friendly Name* and *Description* are displayed in the Report Builder when the user is selecting data for the report. The *Default Format* and the *Default Alignment* drop-down lists set its initial format and alignment in the Report Builder. The *Hidden* checkbox determines whether the column is visible through the Report Builder selection process.

The *Use as Primary Object* checkbox specifies whether the data object is displayed in the initial list of data objects on the **Modify Data Source** dialog box in the Ad Hoc Report Builder.

This allows the System Administrator to exercise more control over the initial list of data objects displayed to the user. A typical use-case would be to remove lookup tables from the initial list of objects.

Columns are displayed to the end-user in the Report Builder in the same order displayed in the *Modify Data Objects* page. The columns can be displayed alphabetically by *Friendly Name* by clicking the *Friendly Name* column header. They can also be rearranged by using the drag-and-drop capability.

Click **Save** to save any changes.

Notes:
Drag-and-drop capability exists throughout the Ad Hoc interface. Mouse down on the handle ( ) at the left of each row in the grid, drag the row to the target location and release the mouse.

Choose appropriate values for the Default Format to avoid undesirable results when generating reports.

If *HTML* is selected as the Default Format, then an end-user will not be able to change the format of the column in the Report Builder to something else.

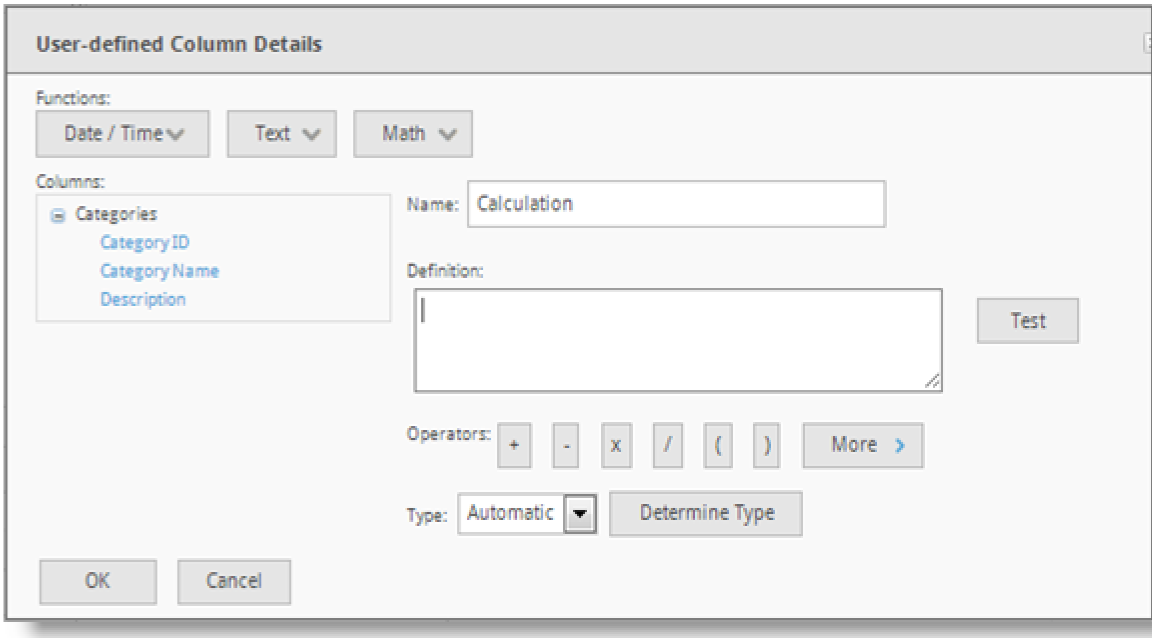
The *Preserve line feed* format allows text in a memo type field to be displayed as it is stored with line feeds (a.k.a., carriage returns) intact. This is the default format for data types of Long Text (e.g., LongVarWChar).

Managing User-Defined Columns

The System Administrator can extend the list of columns for a data object by creating ser-defined columns. The definition of a user-defined column must conform to the SQL SELECT syntax for a column of the reporting DBMS.

Typical uses of user-defined columns include string formatting and concatenation, CASE statements, and in-row calculations.

To create a user-defined column, click the **Add a User-defined Column** button. The following dialog box will be displayed:



Enter a unique *Column Name* and the *Definition* in the controls provided.

The *Definition* must be a valid SQL statement. If design-time validation is ON, this statement will be validated against the database to assure it's syntactically correct.

If the column includes a calculation that uses an existing column, use the *Columns* tree to select it and insert it in the *Definition*.

Clicking one of the *Operators* buttons will insert that operator into the *Definition* at the last cursor position.

Select the *Data Type* of the expected result of the *Definition*.

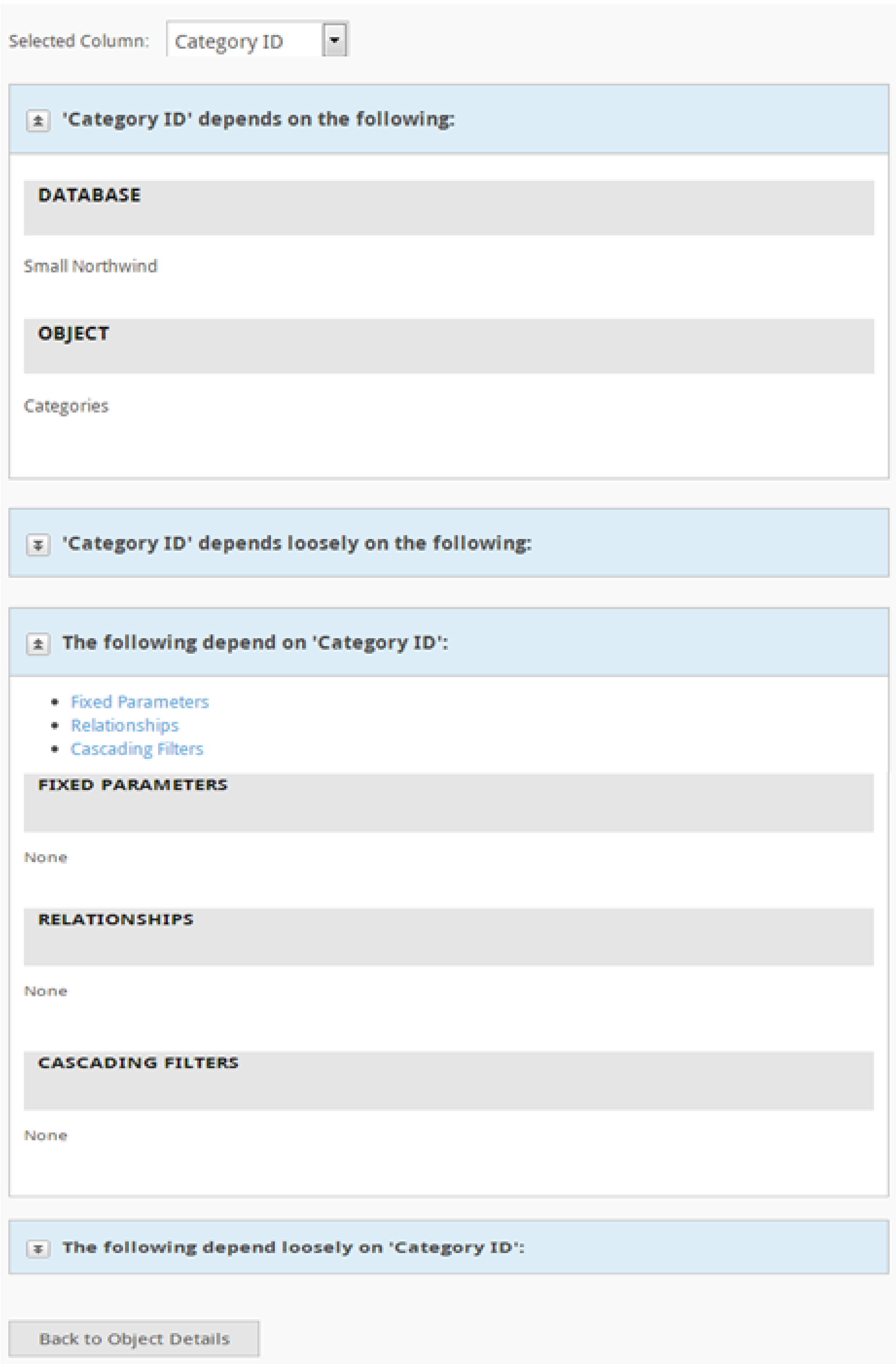
Click **OK** to validate the *Definition* and save the result.

Once a user-defined column has been created, it can be changed or removed by hovering your mouse cursor over the icon for the user-defined column to display the available actions and clicking either the **Modify Column** or **Remove Column** option. These actions are *not* an option for the original columns of the data object.

Click **Save** on the *Modify Data Objects* page to commit the user-defined column definition to the metadata database.

Viewing Dependencies

To view a column's dependencies from the Modify Data Objects page, hover your mouse cursor over the icon to display the available actions and click the **View Dependencies** option. The following page will be displayed:



The content of the page has been adjusted in order to get the image to fit on the page.

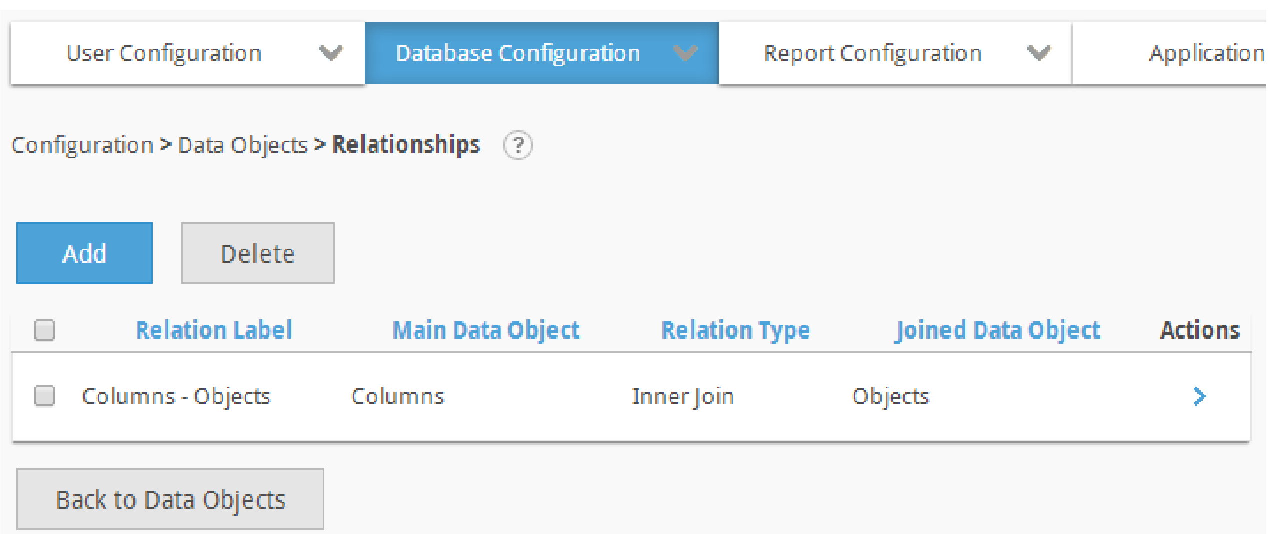
The View Dependencies presents a report detailing where the column is used throughout the Ad Hoc instance. This report can help System Administrators determine the potential scope and impact of changes to a column definition.

Adding a Data Object Relationship

The System Administrator can define relationships between data objects. When a relationship exists between two data objects, selection of one of the data objects will present the end-user with the opportunity to select the related data object in the Report Builder.

Refer to the *Relationships* section of this document for detailed information about creating and managing relationships.

To define relationships for a data object from the Data Objects page, hover your mouse cursor over the icon to display the available actions and click the **Set Relations** option. The following page will be displayed:



A list of relationships between the current data object and other data objects in the database will be displayed.

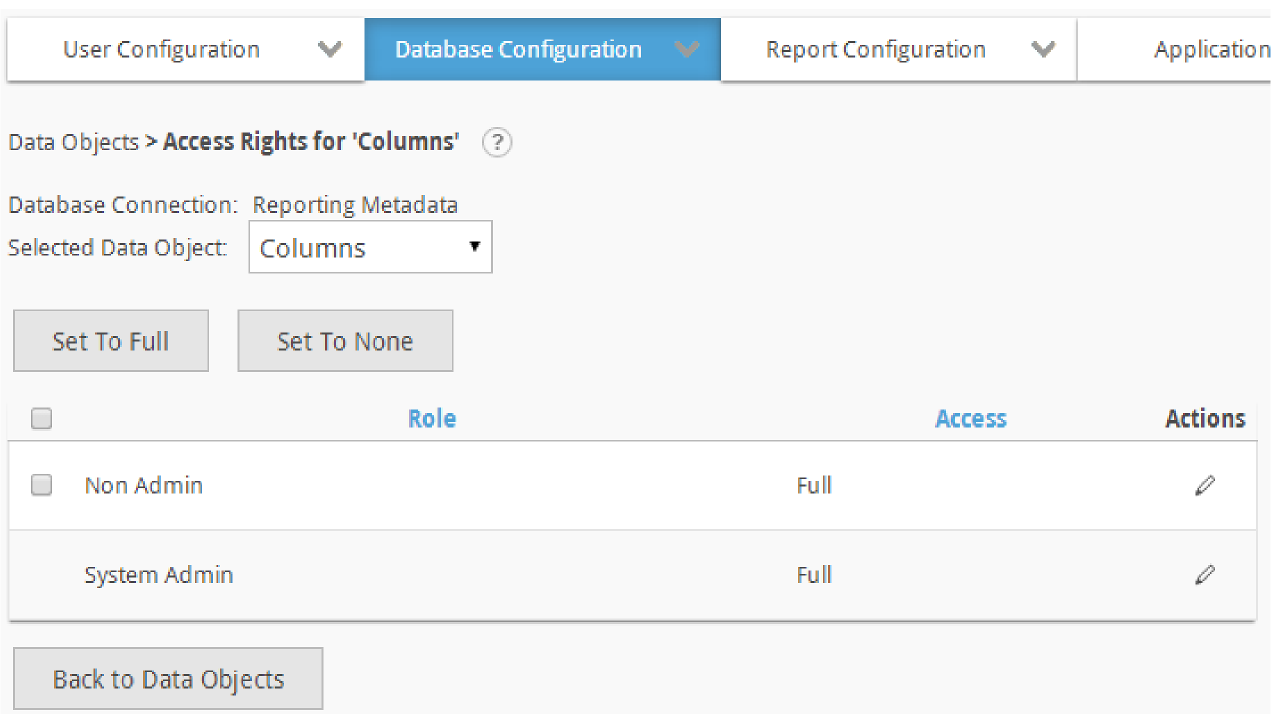
Click **Add** to create a new relationship.

Setting Data Object Access Rights

Data Object access rights can be set for the data object or for specific columns in the data object for each Role associated with the current reporting database. Data Object access rights determine which data objects and columns are restricted from use by a Role. By default, all data objects and columns are accessible by all roles associated with the current reporting database.

For detailed help setting access rights, refer to *Setting Data Object Access Rights* in the *Roles* section of this document.

To set the access rights for a data object from the Data Objects page, hover your mouse cursor over the icon to display the available actions and click the **Set Data Object Access Rights** option. The following page will be displayed:



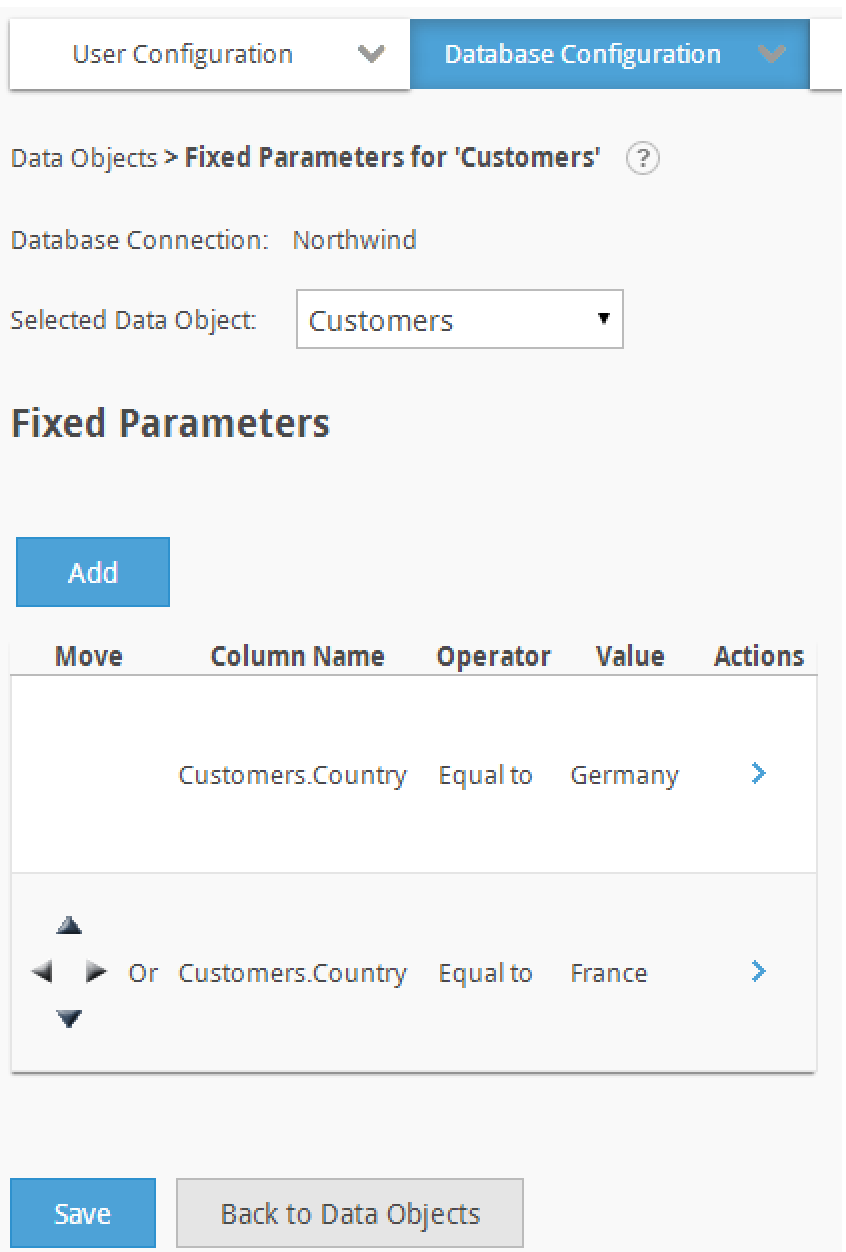
Access rights for the object specified in the *Selected Data Object* list can be set to Full or None for a role by selecting the role with the checkboxes and clicking **Set to Full** or **Set to None**.

Alternatively, click the icon to display the **Column Access Rights** dialog box and set the access at the column level.

Specifying Fixed Parameters

Permanent filters can be applied to a data object. These filters are called “fixed parameters” and are transparent to the end-user. Additional parameters can be applied as the report is built and executed, but the end-user cannot modify a fixed parameter on the data object.

To define and manage fixed parameters for a data object, hover your mouse cursor over the › icon to display the available actions and click the **Set Parameters** option. The following page will be displayed:



A fixed parameter takes the form of an equation similar to:

Label is *Compared* to *Value*

where *Label* represents a column name, *Compared* represents a comparison operator, and *Value* represents a threshold.

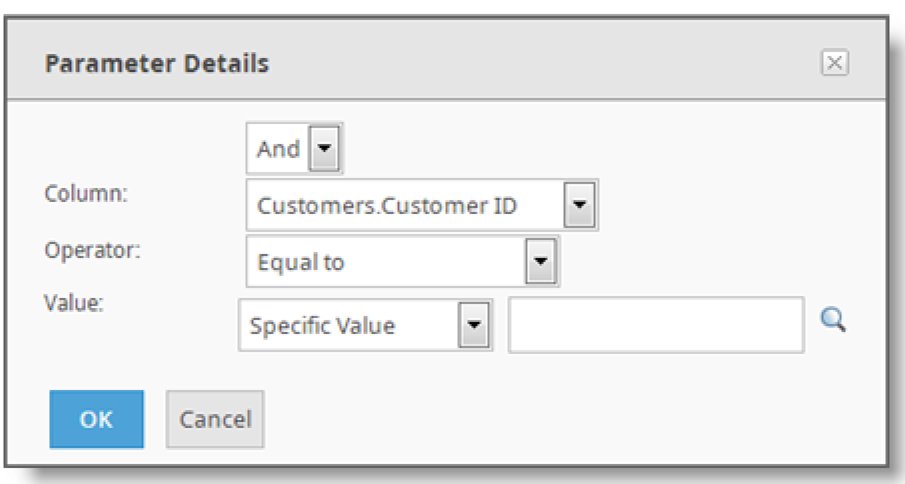
The available comparison operators are:

- Equal to
- Not equal to
- Less than
- Greater than
- Less than or equal to
- Greater than or equal to
- Starts with [1]
- Does not start with [1]
- Ends with [1]
- Does not end with [1]
- Contains [1]
- Does not contain [1]
- Is null
- Is not null
- Between
- Not between
- In list
- Not In List
- Like [1]
- Not Like [1]

Notes:
1. These operators are only available for data type of type String or Text.
2. The operators available are dependent upon the column's data type. For example, a numeric data type would not include operators such as true/false.

Managing Fixed Parameters

Click the **Add** button to define a fixed parameter. The following dialog box will be displayed:



If fixed parameters have been previously defined, the option to specify an And/Or condition will also be displayed.

Select the *Column* from the drop-down list, an *Operator* from the drop-down list, and either provide a *Value* manually or use the magnifying glass to select a *Value* from the reporting database.

Click **OK** to save the fixed parameter information temporarily.

After adding all of the fixed parameters, click **Save** on the Parameters page to save the information in the metadata database.

To edit or remove a fixed parameter, hover your mouse cursor over the icon to display the available actions and click the **Edit Parameter** or **Remove Parameter** option.

Notes:
1. If the *In list* or *Not in list* operator is selected, then more than one value can be specified. If manually entering each value, follow each entry by pressing the Enter key.
2. If the value is a number, the Value field must contain a valid number to build the report.
3. The Parameter functionality does not support conditions for Time data types. Date/Time data types are supported but their time portion will be ignored.

Hint:
When adding multiple parameters, a logical operator (And or Or) becomes available for selection at the beginning of the next parameter. Use this operator to set the cumulative conditions for the parameters.

If the report contains two or more parameters, the icon appears for each additional parameter. The directional pad gives you the ability to create *levels* for each parameter. Control the order of evaluation for multiple parameters using the directional pad.

Advanced data filtering makes it possible to define groups of parameters that work together to filter undesirable data. Multiple parameters can be defined to control the order of evaluation. Filter data to control what users see at runtime.

Fixed parameters on data objects give administrators the ability to control the content seen by end-users. Filter extraneous data by defining one or more parameters that are evaluated at runtime. The directional pad control ( ) enables administrators the ability to control the order of evaluation.

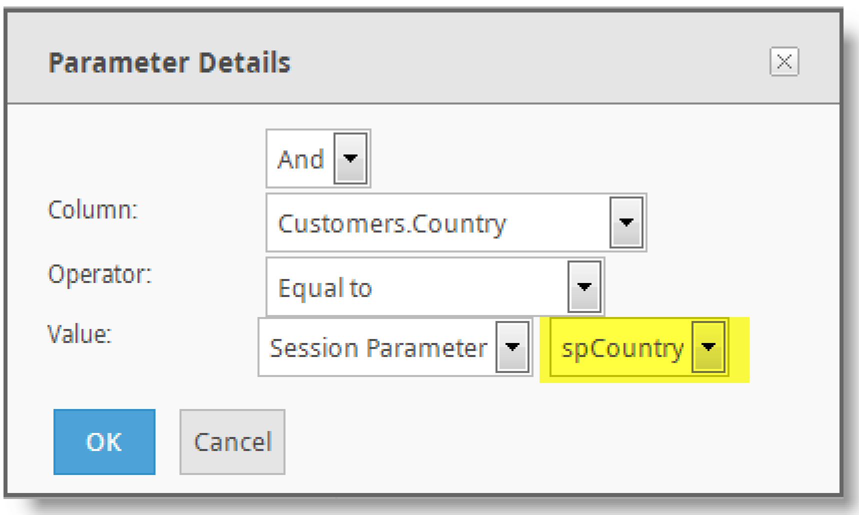
The individual arrows of the control perform the following functions:

▲ Shifts a parameter one position higher in the list (retains indentation)
▼ Shifts a parameter one position lower in the list (retains indentation)
◀ Indents a parameter one position left
▶ Indents a parameter one position right

Parameters indented furthest to the *right* are evaluated first.

Using Session Parameters

If session parameters have been defined for the Ad Hoc instance, the Fixed Parameters Details dialog box may appear slightly differently:



Notice that there is a *Value* source drop-down list in the example above. This drop-down list is shown when there can be session parameters used as part of the filter. The source is typically a “Specific Value”; however, if session parameters have been defined, “Session Parameter” can be selected as the *Value* source. When “Session Parameter” is selected, a drop-down list of relevant session parameters is displayed.

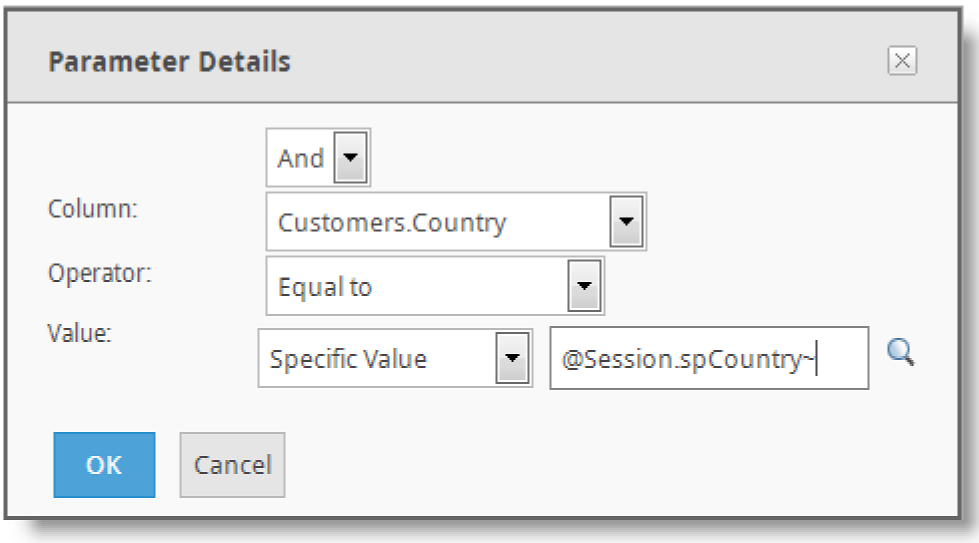
Session parameters are one of five types; date, number, numeric list, text or textual list. The drop-down list of session parameters will contain the session parameters that match the data type of the *Column*. The list is also restricted by the *Operator* selected.

For date *Columns*, the date session parameters will be shown in the list of available session parameters.

For numeric *Columns*, either the number or numeric list session parameters will be shown in the list of available session parameters. If the *Operator* is set to *In list* or *Not in list*, the numeric list session parameters will be shown, otherwise the number session parameters will be shown.

For text *Columns*, either the text or textual list session parameters will be shown in the list of available session parameters. If the *Operator* is set to *In list* or *Not in list*, the textual list session parameters will be shown, otherwise the text session parameters will be shown.

In older versions of Logi Ad Hoc, session parameters could also be used as the basis for a fixed parameter on a data object as shown below:



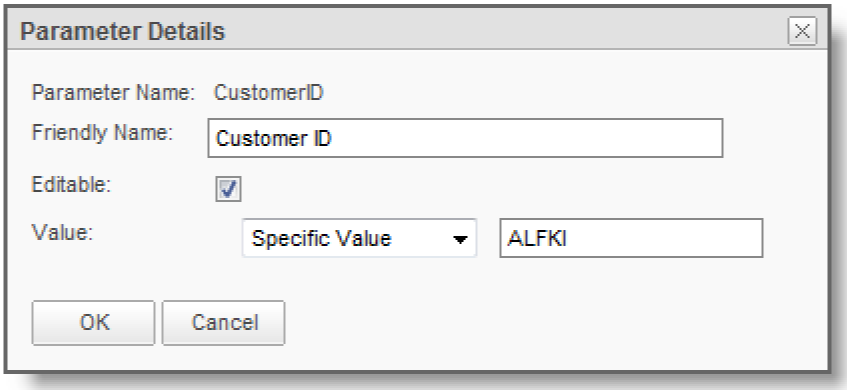
Notice that the *Value* source is “Specific Value” and that a @Session token has been supplied as the *Value*. While this technique is still supported in Logi Ad Hoc, @Session tokens require a specific syntax and the session parameter specified must match the session parameter name exactly, including case. There is no type checking of the value and the SQL syntax generated may not be appropriate in all cases.

The preferred method for using session parameters as the basis for a fixed parameter on a data object is to select “Session Parameter” as the *Value* source and selecting the appropriate session parameter from the available list.

Configuring Input Parameters

Data objects based on stored procedures and functions may require input parameters. Input parameters are simply values that the procedure needs in order to execute properly.

Since the logic associated with the usage of the input parameters is contained within the procedure definition, no operators can be specified for a parameter. The **Parameter Details** dialog box for an input parameter appears as:



The *Friendly Name* that is displayed to the end-user can be adjusted.

The *Editable* checkbox indicates that the parameter value will be obtained through an automatic report filter. When the data object that has editable input parameters is selected for use in a report, the **Modify Data Source** dialog box **Filter** tab will have associated filters automatically created. See the *Filter* description in the *Report Design Guide*.

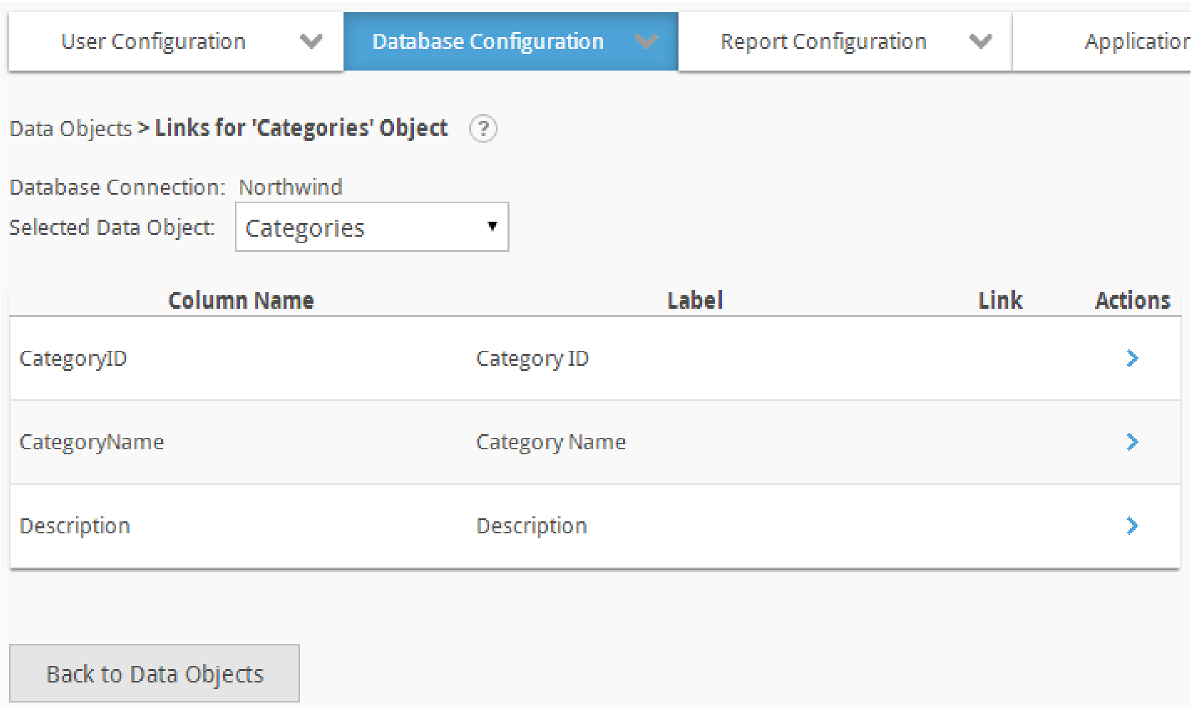
The *Value* can be set as a *Specific Value* or a *Session Parameter* can be used. To enter a specific value, select *Specific Value* from the drop-down list and enter the value in the space provided. To use a session parameter for the *Value*, select *Session Parameter* from the drop-down list and select one of the session parameters from the provided list.

There are no visible indications of the proper format for an input parameter nor are there mechanisms to provide a list of viable options for the value.

Setting Links

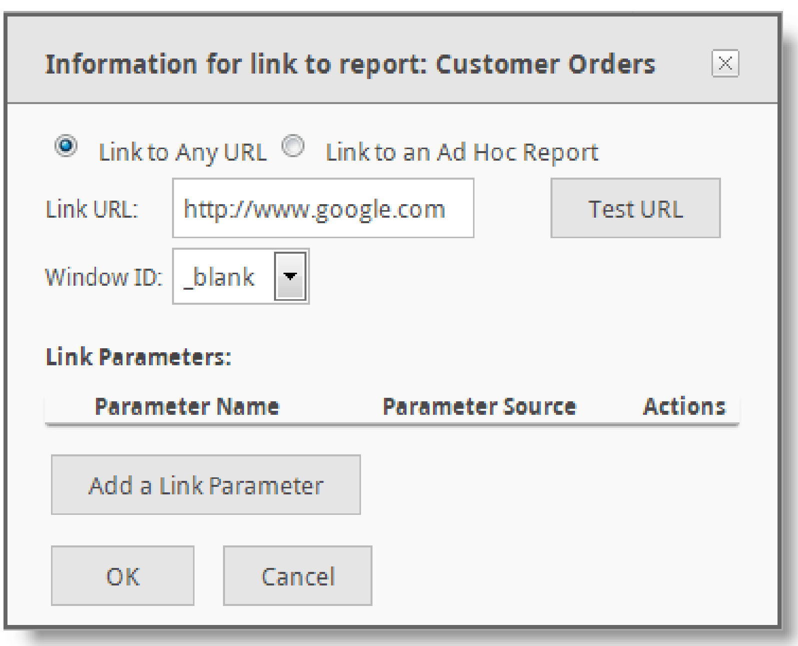
System administrators can create automatic hyperlinks for each record in a specified column. End-users can click these links to open other web pages or drill through to different reports. End-users also have the option of enabling or disabling the links when building reports.

To define and manage links from a data object, hover your mouse cursor over the icon to display the available actions and click the **Set Links** option. The following page will be displayed:



The list contains the columns that are candidates for linking to either a linked report or a URL. A column can only have *one* link defined.

From the list of columns for the data objects, hover your mouse cursor over the › icon to display the available actions, which are **Add Link** or **Edit Link** and **Remove Link.** The following dialog box will be displayed:



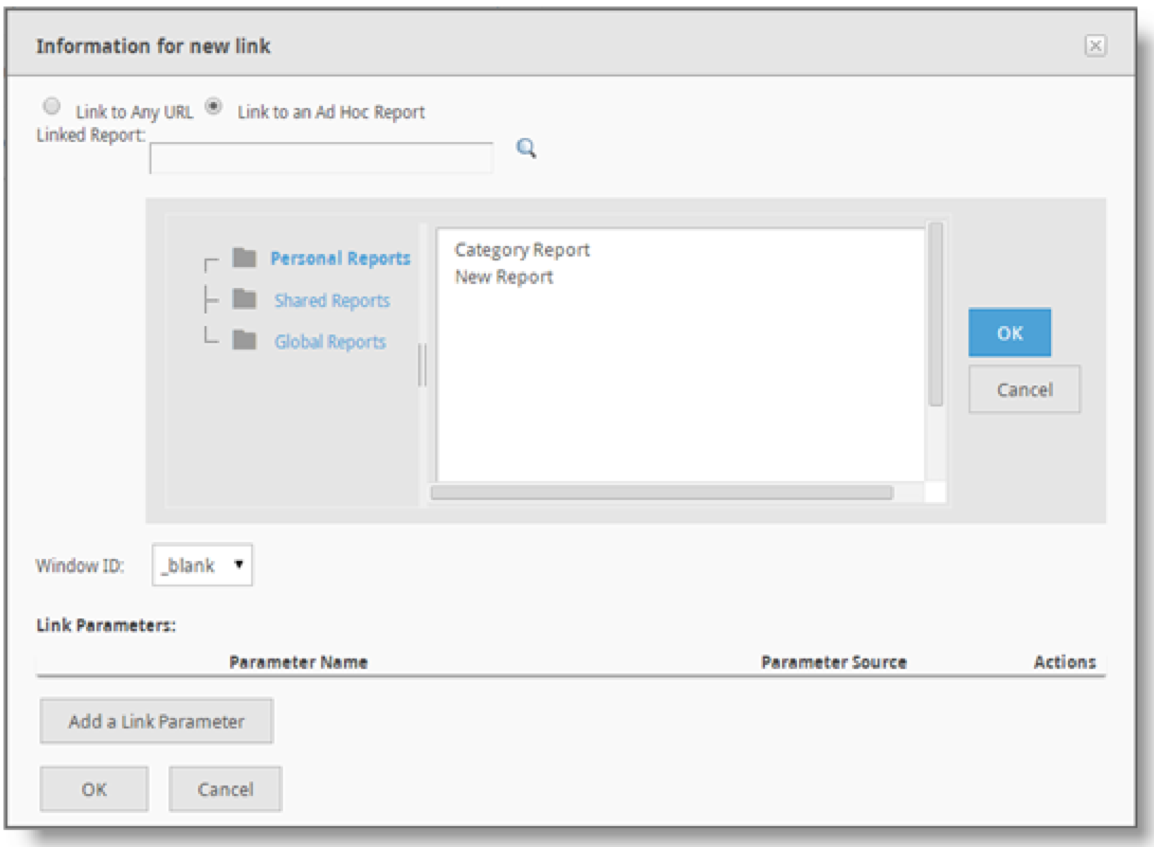
When configuring a link, administrators must first determine if the link leads to an Ad Hoc report or an external URL.

To create an object link to a URL, select *Link to Any URL* and enter the URL. Click **Test URL** to verify it.

To create link parameters, click **Add a Link Parameter** and enter in the parameter name. Choose the column that will be the source of the data for the parameter from the drop-down list.

Click **OK** to save the information.

To create a link to an existing Ad Hoc report, select *Link to an Ad Hoc Report* and the dialog box will be re-displayed:



Click the  icon to locate and choose a report from the list (shown above). After selecting the report, click **OK**.

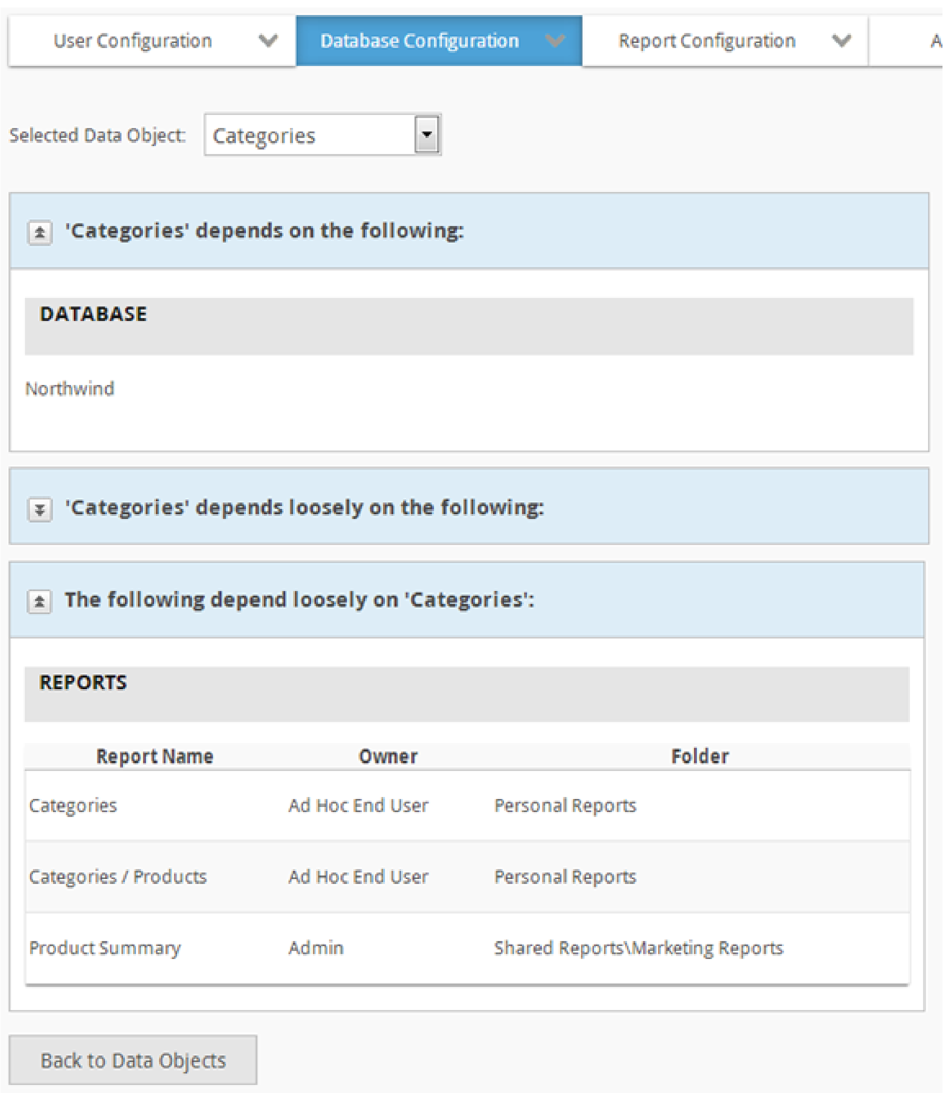
To create link parameters, click **Add a Link Parameter** and click the  icon to select the target parameter. Choose the column that will be the source of the data for the parameter from the drop-down list.

Click **OK** to save the information.

> **Note:**
> Linked reports must have at least one parameter to enable drill-through functionality between two reports where the content of the linked report is dependent upon data from the parent report. Links to a static report do not require link parameters. Refer to the Linking Reports section of this guide for more information about linked reports.

Viewing Dependencies

To view the dependencies for a data object from the *Data Objects* page, hover your mouse cursor over the icon to display the available actions and click the **View Dependencies** option. The following page will be displayed:



The option to view dependencies of a data object may help System Administrators know the scope and impact of changes to a data object.

Catalogs

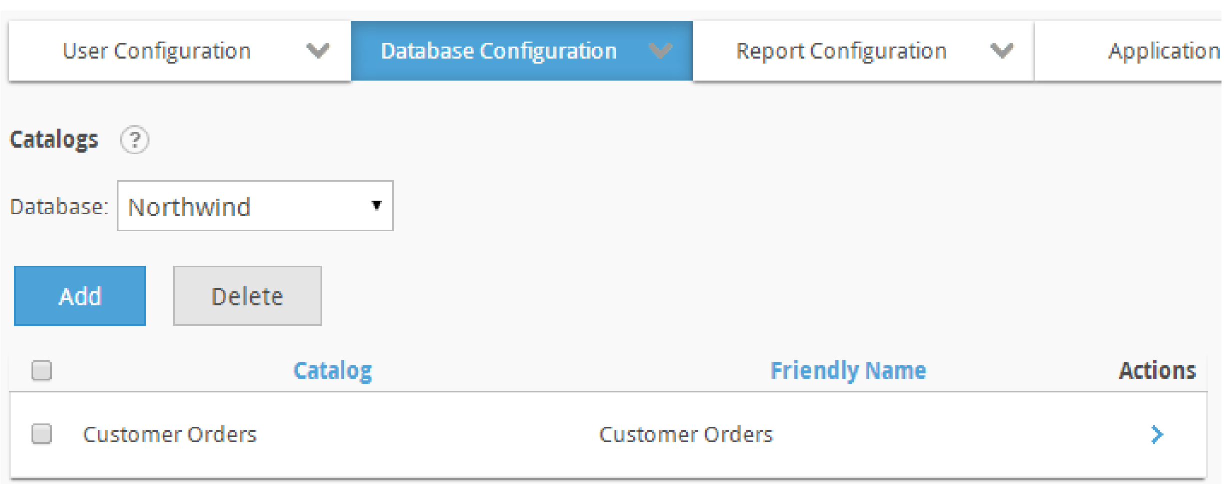
A *catalog* is a predefined collection of related data objects and columns. Catalogs are used to simplify data object selection for the end-user.

Essentially the System Administrator builds a catalog the same way an end-user would select the data objects and columns for a report. A primary data object is selected along with all of the related data objects. This identifies a pool of columns that can be used in the report.

When the System Administrator has identified all of the data objects and columns, the result can be saved as a catalog. A catalog is displayed to the end-user in the list of data objects they may use for reporting.

The catalog definition has two additional features. The System Administrator can eliminate duplicate or ambiguous column references (e.g. columns linking two data objects) and control the column name and friendly name.

Select **Catalogs** from the *Database Configuration* drop-down list to display the *Catalogs* configuration page:



The **Database** drop-down list acts as a filter for the Catalog list. Only Catalogs related to the selected database will be displayed. If only one reporting database has been configured for the Ad Hoc instance, the **Database** filter will not be shown.

Click **Add** to display an empty *Catalog* page.

Click **Delete** to remove the selected catalogs. Catalogs are selected by checking their check-boxes.

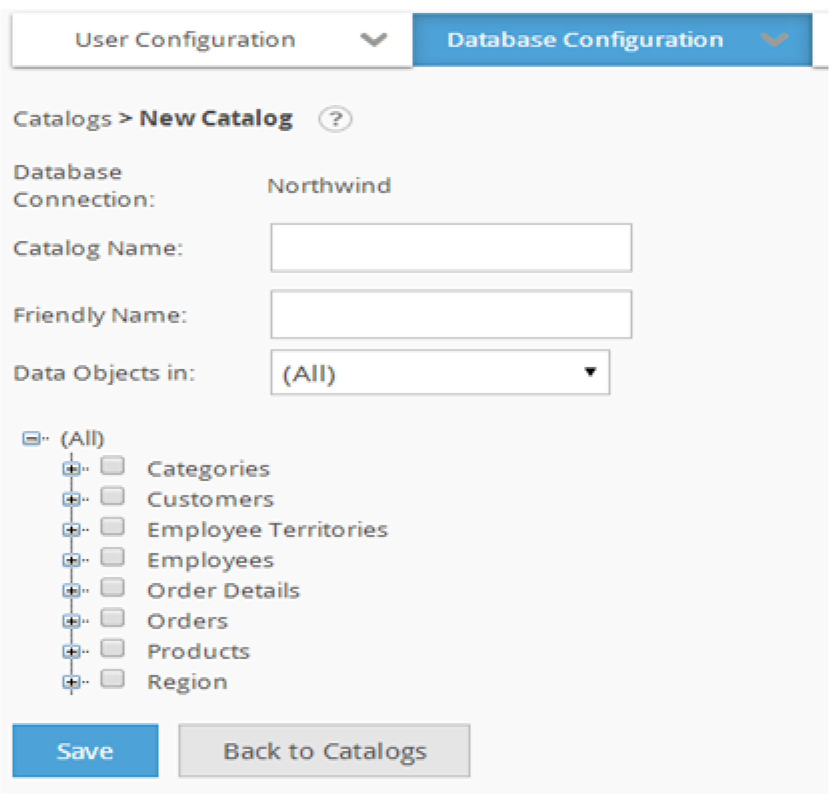
Two actions are available for a Catalog: **Modify Catalog** and **Delete Catalog.** Hover your mouse cursor over the › icon to show them.

Note:
A catalog is a data object and additional configuration options, similar to those of other data objects, are available for existing catalogs through the Database Configuration → Data Objects pages. However, an important difference is that relationships cannot be created between a catalog and other data objects.

Adding a Catalog

Creating a catalog requires selecting a catalog name, identifying the related data objects, and selecting the columns displayed to the end-user. Optionally, the column names and friendly names can be specified as well as the friendly name of the catalog.

To create a catalog, click **Add** to display the following page:



Click the ? icon to display brief help for the *Catalog* page.

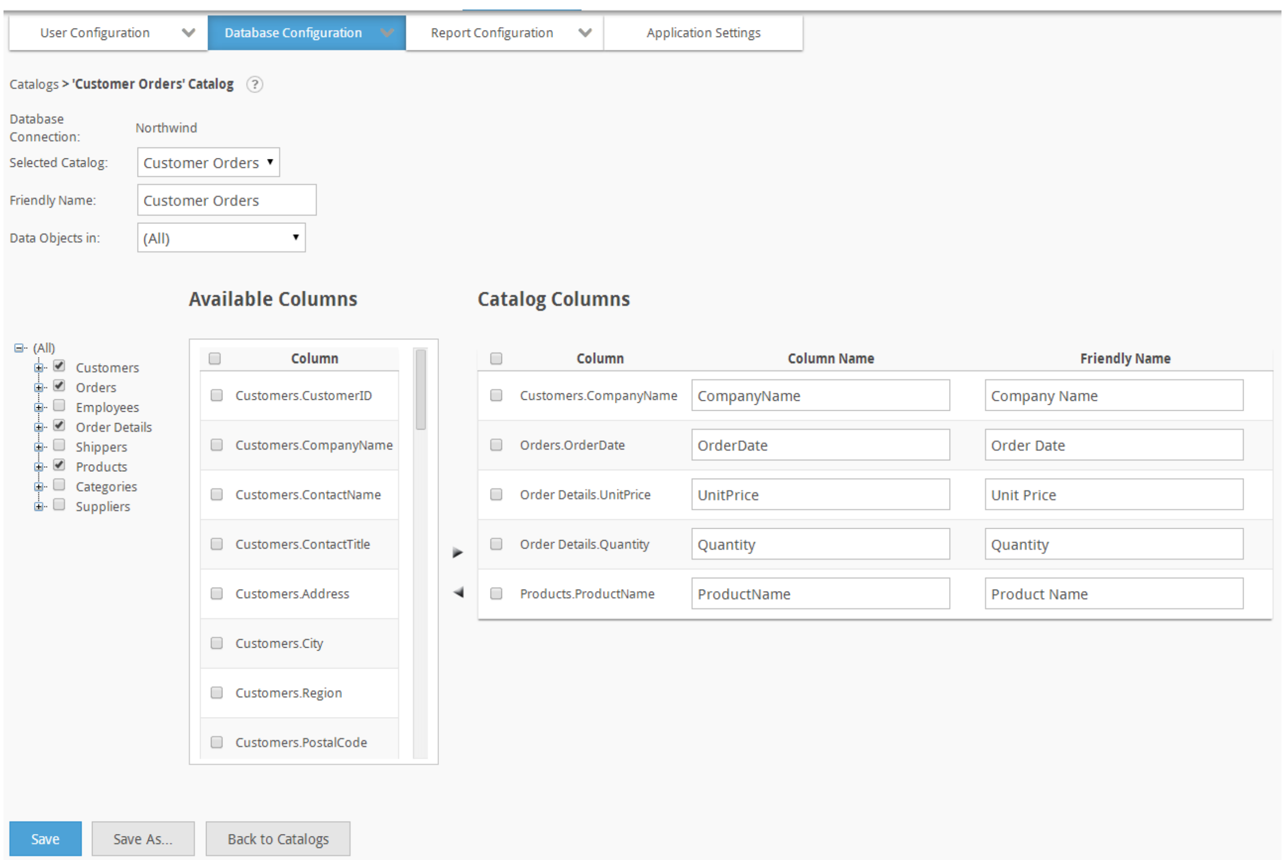
The *Database Connection* identifies the currently selected reporting database. The list of data objects is restricted to this reporting database schema.

Enter a unique *Catalog Name* and *Friendly Name* for the catalog.

If Categories of data objects have been defined, a drop-down list of the categories will be shown in the *Data Objects in* list. Selecting a category will act as filter on the initial list of data objects displayed.

Identify the main data object for the catalog by clicking on the checkbox adjacent to the data object. The data object tree can be expanded to show columns for each data object by clicking the "+" icon.

Once a data object has been selected, the list of *Available Objects* will be populated and visible. Continue selecting the related data objects until the basic catalog content has been satisfied. The *Catalog* page will appear as:



From the *Available Column* list, select the columns to be included in the catalog by cvhecking their checkboxes clicking the **right-arrow** icon. All columns can be selected by checking the checkbox in the header of the *Available Columns* list.

The System Administrator now has the opportunity to manually adjust the *Column Name* and *Friendly Name* for each column in the *Catalog Columns* grid. Columns can be removed from the catalog by selecting the column with the adjacent checkbox and clicking the **left-arrow** icon.

Column Names must be unique.

Click **Save** to save the catalog information.

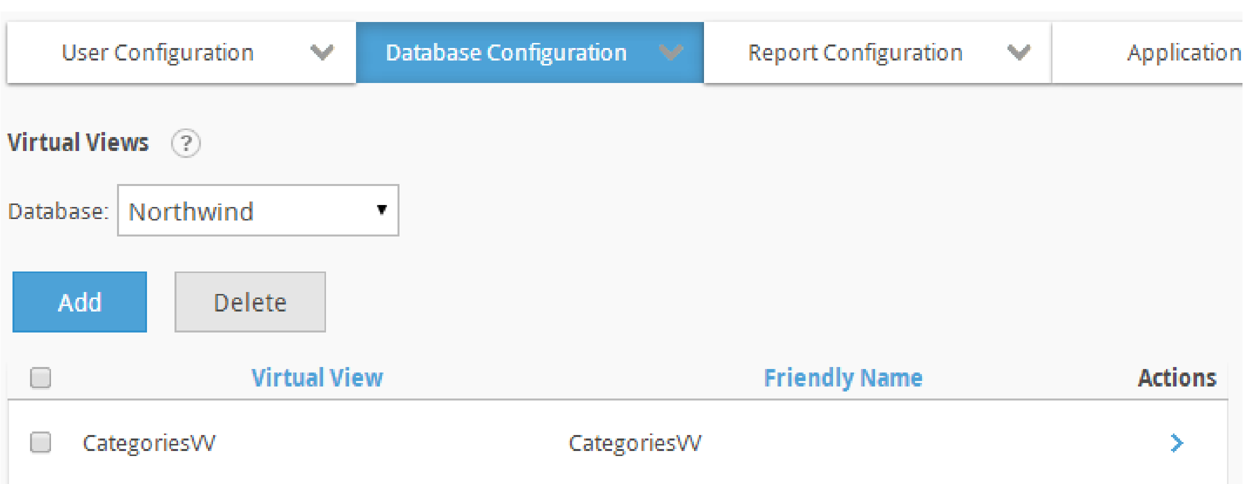
Adding a Catalog Using "Save As"

The administrator can create a new catalog by modifying an existing catalog and then saving it. Click **Save As** and specify the new *Catalog Name* and *Friendly Name*.

Virtual Views

The Virtual Views page allows the System Administrator to create customized views from objects in the source database. End-users can include virtual views as a data source when building reports. Virtual views are saved to the application metadata database, leaving the source database unmodified.

Select **Virtual Views** from the *Database Configuration* drop-down list to display the *Virtual Views* configuration page.



The **Database** drop-down list acts as a filter for the Virtual View list. Only Virtual Views related to the selected database will be displayed. If only one reporting database has been configured for the Ad Hoc instance, the **Database** filter will not be shown.

Click **Add** to display an empty *Virtual View* page.

Click **Delete** to remove the selected virtual views. Virtual views are selected by clicking on their checkboxes.

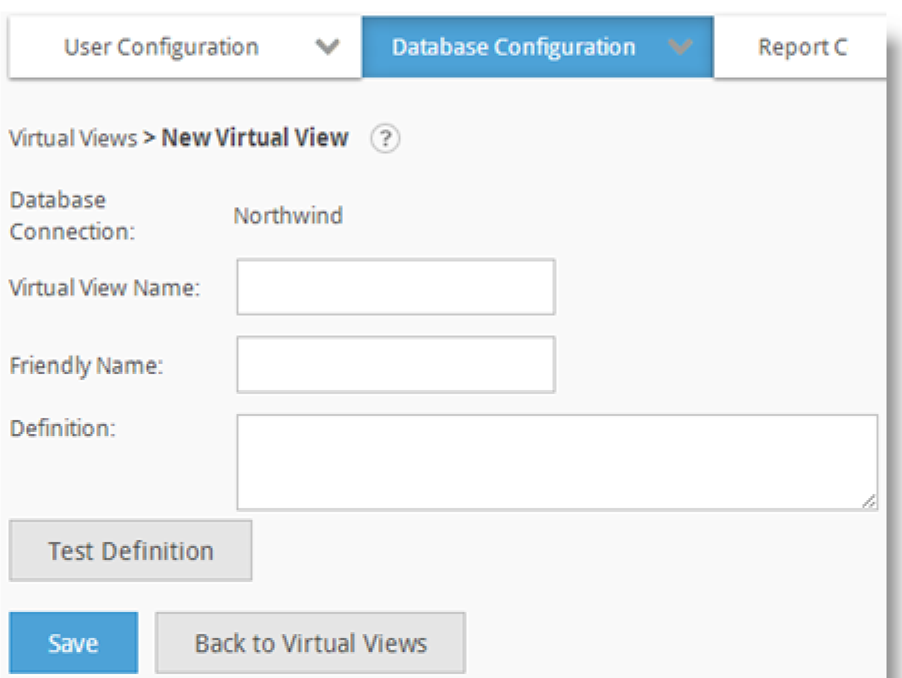
Note:
Removing a virtual view marks any reports that depended on that virtual view as broken. Delete virtual views with caution.

Two actions are available for a Virtual View: **Modify Virtual View** and **Delete Virtual View.** Hover your mouse cursor over the icon to show them.

Adding a Virtual View

A virtual view is essentially a pre-defined SQL Select statement. Typically virtual views are used to relate multiple tables, perform data conversions, and reduce the number of data objects that the end-user sees.

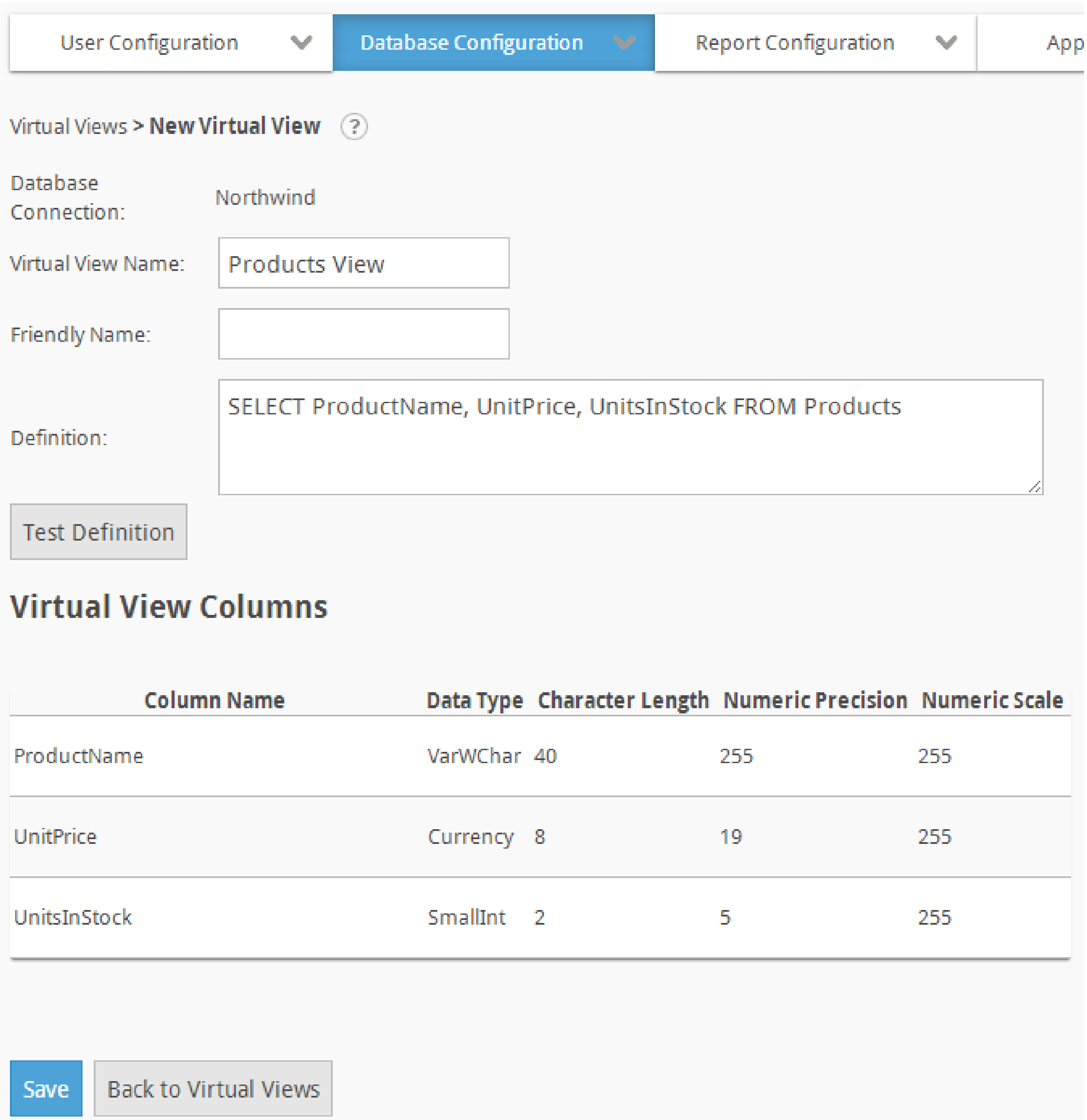
To create a virtual view, click the **Add** button. The following page will be displayed:



The *Database Connection* identifies the currently selected reporting database.

Enter a unique *Virtual View Name*, *Friendly Name*, and *Definition*. The *Definition* is a SQL Select statement that conforms to the syntax rules for a SQL sub-query. Virtual views are implemented in the report definitions as "`SELECT * FROM (`*`Definition`*`)`".

Click **Test Definition** to verify the *Definition* syntax using the reporting database. If the test completed successfully, the page will display the schema information returned by the query. For example:



Click **Save** to save the virtual view definition in the metadata database.

Creating Virtual Views Using 'Save As'

The administrator can create a new Virtual View by modifying an existing one, clicking **Save As**, entering a new *Virtual View Name* and *Friendly Name*, and clicking **OK**.

Hint:
Always remember to test the virtual view definition to ensure that the correct data columns are returned. Modifying the sub-query later may break reports that depend on the virtual view for data.

Modifying Virtual Views

A virtual view can be modified by clicking on the icon in the list of Virtual Views. The *Friendly Name* and the *Definition* can be modified.

Click **Test Definition** to verify the new information. The *Virtual View Columns* grid will be updated and identify the differences between the original *Definition* and the new *Definition*. For example:

Virtual View Columns

Column Name	Data Type	Character Length	Numeric Precision	Numeric Scale
ProductName	VarWChar	40	255	255
UnitPrice	Currency	8	19	255
UnitsInStock	SmallInt	2	5	255
UnitsOnOrder	SmallInt	2	5	255

Legend: Unchanged To be removed

Click **Save** to save the modified information in the metadata database.

Notes:
Modifying a virtual view's sub-query may break reports that depend on the virtual view for data. Modify virtual views with caution.

Use only SQL sub-query statements when creating virtual views; statements such as ORDER BY are *not* supported. For security purposes, the following SQL statements are always prohibited: EXECUTE, INSERT, UPDATE, and DELETE.

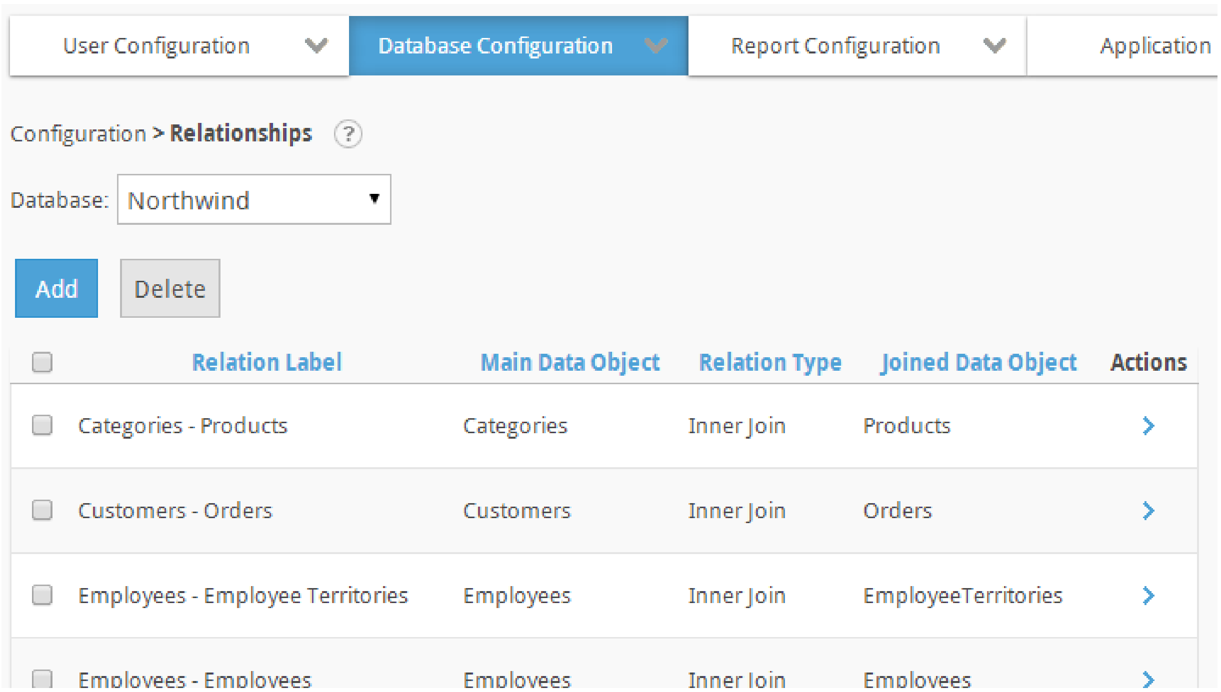
Relationships

The Relationships page allows the System Administrator to create join relationships for data objects in the Ad Hoc instance. Join relationships must be defined within the instance because relationships that exist in the source database are not synchronized by the Schema Wizard. Join relationships created in the Relationships page are stored in the Ad Hoc metadata database; the reporting database is not modified.

Relationships impact the end-user when they are selecting data objects in the Report Builder to be included in the report. When they select the first data object, the list of data objects is adjusted to show the selected data object and any related data objects. Every time a data object is selected, the list of related data objects is refreshed.

Hint:
When using Microsoft SQL Server, Oracle, Informix, or Sybase as a reporting database, administrators can utilize the *Import Relationships* action in the Management Console to synchronize the instance with join relationships from the reporting database. Refer to the *Management Console Usage Guide* for more details.

Select **Relationships** from the *Database Configuration* drop-down list to display the *Relationships* configuration page:



A list of relationships is displayed, allowing the System Administrator to view information associated with each relationship, such as the type of relation and which objects are joined together.

In the grid, *Main Data Object* refers to the *left* data object and *Joined Data Object* refers to the *right* data object.

The **Database** drop-down list acts as a filter for the Relationship list. Only Relationships related to the selected database will be displayed. If only one reporting database has been configured for the Ad Hoc instance, the **Database** filter will not be shown.

Click **Add** to display an empty *Relationship* page.

Click **Delete** to remove the selected relationships. Relationships are selected by checking their checkboxes.

Note:
Removing relationships marks any reports that depend on that relationship as *broken*. Delete relationships with caution. Use the *View Dependencies* option to determine the scope and usage of a relationship.

The rows in the relationship grid can be sorted by clicking on the *Relation Label, Main Data Object, Relation Type,* or *Joined Data Object* column headers.

The icon indicates that more than one action can be performed on the data object. Hover your mouse cursor over the icon to display the available actions and click the appropriate one. The available actions for a relationship are **Modify Relationship**, **Delete Relationship**, and **View Dependencies.**

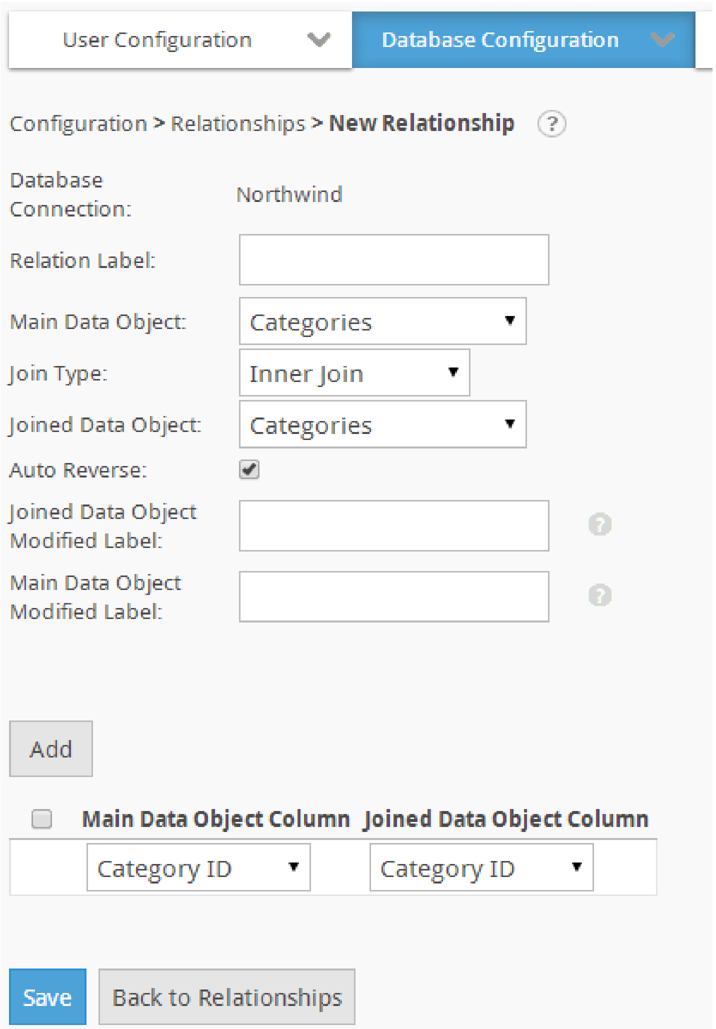
The following join types are available in the application:

- **Inner Join** - Retrieve records when a match exists in *both* tables
- **Left Outer Join** - Always retrieve records in the *left* table
- **Right Outer Join** - Always retrieve records in the *right* table

Hint:
Normally, only one relationship needs to be defined between two data objects. Although three relationship types are allowed, avoid creating more than one. In the event that more than one relationship type is created between the same two data object, attempt to make the relationship's label descriptive.

Adding a new Relationship

To create a new relationship between two data objects, click **Add**. A blank *Relationship* page will be displayed:



The *Database Connection* identifies the currently selected reporting database.

We recommend that the *Relation Label* you enter clearly identify the data objects and relationship type; however, that's not a requirement.

The *Main Data Object* and the *Joined Data Object* specify the two data objects that are related. Select a data object from each of the respective lists.

Select the *Join Type* from the provided list.

The *Auto Reverse* checkbox indicates whether the relationship is "literal" or "logical". Ad Hoc has the ability to logically relate the two data objects. If a relationship is defined, the logical reverse of the relationship can be assumed by checking this checkbox.

If the *Auto Reverse* checkbox is unchecked, the relationship is "literal". When the user selects the *Main Data Object* for their report, the related *Joined Data Object* will be shown. However, if the *Joined Data Object* is selected for the report, the related *Main Data Object* is *not* shown. The relationship only exists in one direction.

The *Joined Data Object Modified Label* and the *Main Data Object Modified Label* are displayed in the Report Builder to help identify the data objects to the end-user. Enter a “nickname” for the data objects to be displayed when the data object available for selection in the Report Builder.

Relationships can also exist between columns in the data objects. Normally relationships are based on a single pair of columns in the two data objects; however, compound relationships based on multiple column pairs can be created.

Select the columns to be related from the drop-down lists for the *Main* and *Joined Data* objects. For compound relationships, click **Add** and select the second pair of related columns. To remove column pairs, select the pair of columns with their checkboxes and click the **Delete** button that becomes visible with more than one pair of related columns.

Click **Save** to save the relationship in the metadata database.

Notes:
If the Main Data Object drop-down list is inactive, relationships can only be created from that specific object to another object.

Modifying Relationships

To modify a relationship, hover your mouse cursor over the › icon to display the available actions and click the **Modify Relationship** action.

The *Relationship* page will be displayed.

Modifications to either the data objects or related columns will break the reports that rely on them. We highly recommend that you run the **View Dependencies** report first to identify the scope and impact of any relationship changes you’re considering.

Modifications to the *Auto Reverse* flag may break reports.

Modifications to any of the labels will not impact the reports.

Make the necessary adjustments to the relationship and click **Save** to save the modified relationship in the metadata database.

View Dependencies

To view the dependencies for a relationship from the *Relationships* page, hover your mouse cursor over the › icon to display the available actions and click the **View Dependencies** option.

The option to view dependencies of a relationship may help System Administrators know the scope and impact of changes to a relationship.

Report Configuration

Ad Hoc gives system administrators the ability to manage the following report configuration options:

- Cascading Filters
- Presentation Styles
- Data Formats
- Scheduled Reports
- Archives
- Report Settings

Cascading Filters provide a series of dependent drop-down lists where the value selected in the first list affects the values displayed in the second list and in subsequent lists in a cascading fashion. Users may include pre-defined cascading filters as report parameters.

Presentation Styles give users a range of options for formatting data points, based on a specific criteria.

Data Formats give users a range of options for displaying data types in specific formats (e.g., 1000 as $1,000.00).

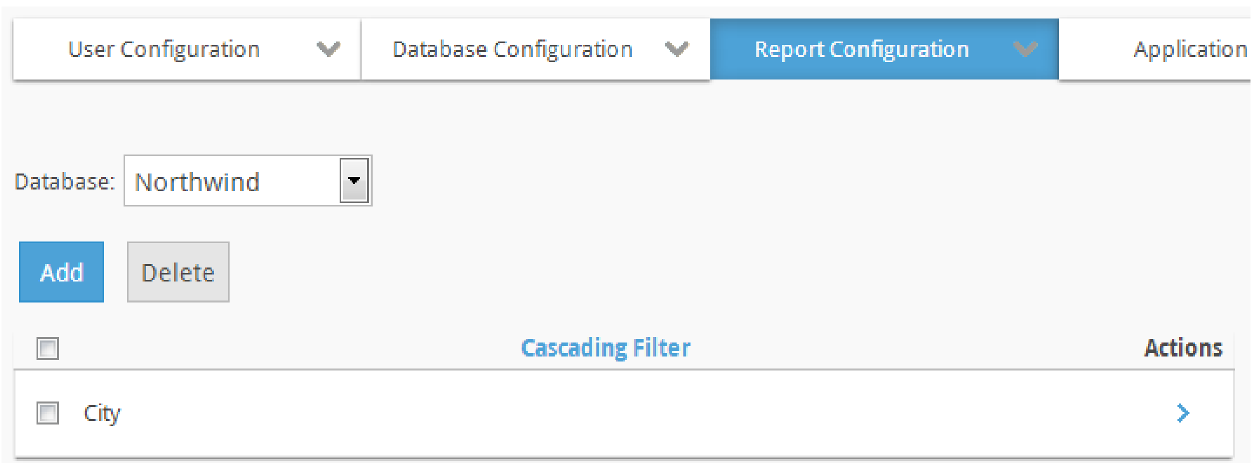
System Administrators can manage report *Schedules* and *Archives* for each database connected to the Ad Hoc instance. If the selected database is not configured for archiving and scheduling, their links will not be visible in the *Report Configuration* list. Refer to the *Management Console Usage Guide* for help configuring databases for archiving and scheduling.

Report Settings allow administrators to configure general settings for reports, as well as limit the maximum number of records displayed in a report.

Cascading Filters

The Cascading Filters page allows the System Administrator to create and configure cascading filters for use when building reports with the Report Builder. The term *cascading filter* refers to a series of dependent drop-down lists where the value selected in the first list affects the values displayed in the second list. Cascading filters have no default values but instead rely on user input at runtime.

Select **Cascading Filters** from the *Report Configuration* drop-down list to display the *Cascading Filters* configuration page.



The **Database** drop-down list acts as a filter for the Cascading Filter list. Only Cascading Filters related to the selected database will be displayed. If only one reporting database has been configured for the Ad Hoc instance, the **Database** filter list will not be shown.

Click **Add** to display an empty *Cascading Filter* page.

Click **Delete** to remove the selected cascading filters. Cascading filters are selected by checking their checkboxes.

Two actions are available for a Cascading Filter: **Modify Filter** and **Delete Filter.** Hover your mouse cursor over the › icon to show them.

Each cascading filter is comprised of one or more *filter items*. One filter item equals one drop-down list. Administrators must configure the following four attributes for each filter item:

- *Data Object* - The data object used to populate the drop-down list.
- *Filter Column* - The column that is filtered by the value selected from the previous filter item.
- *Value Column* - Tthe column that provides the value for the next filter item.

- *Display Column* - The column that provides the values for the drop-down list.

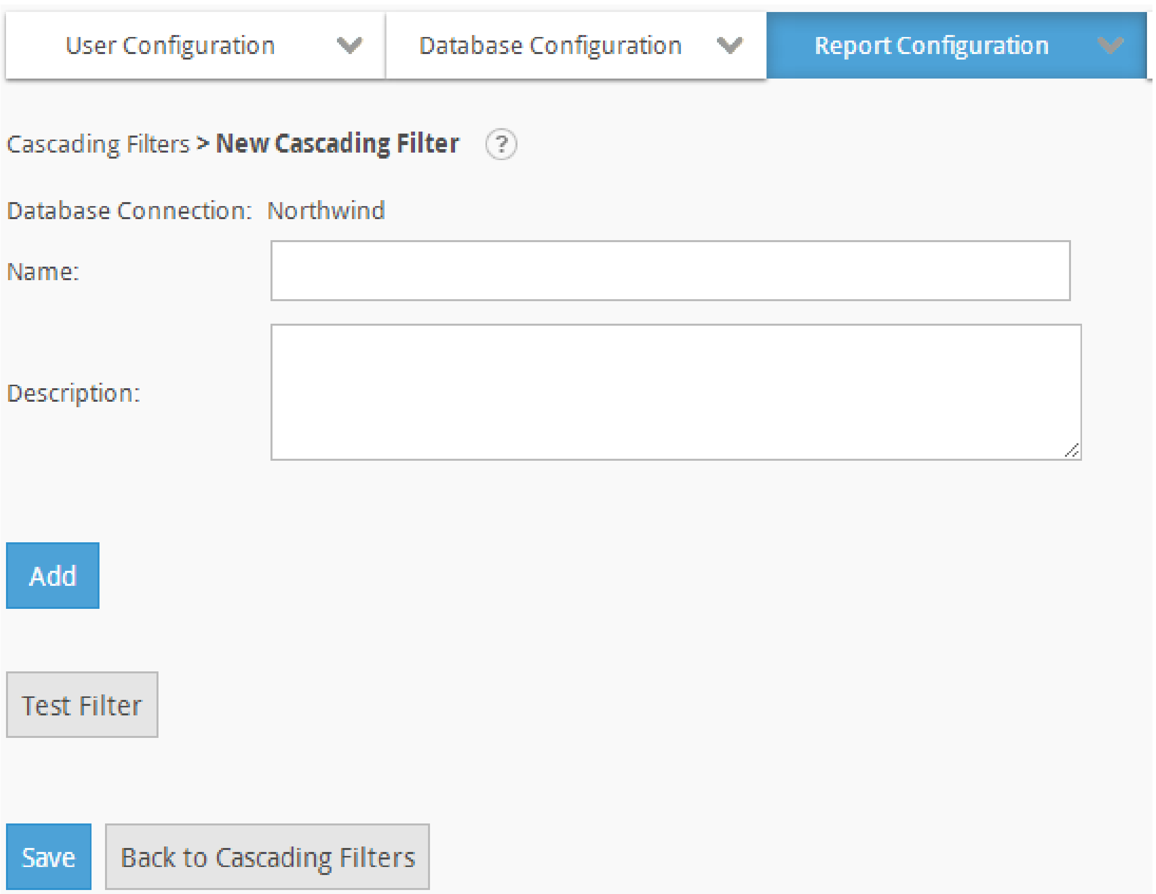
Cascading filters are used as parameters in reports. From the Report Builder, end-users must select a column to filter and then choose **In cascading list** as the operator. A list of all the cascading filters present is displayed and the end-user must choose one.

Note:
The first filter item always contains a blank value for the Filter Column.

The “In cascading list” and “Not in cascading list” options are only displayed to the end-user creating a report when the column selected to be filtered matches the *last Value Column* in the cascading filter definition.

Adding a new Cascading Filter

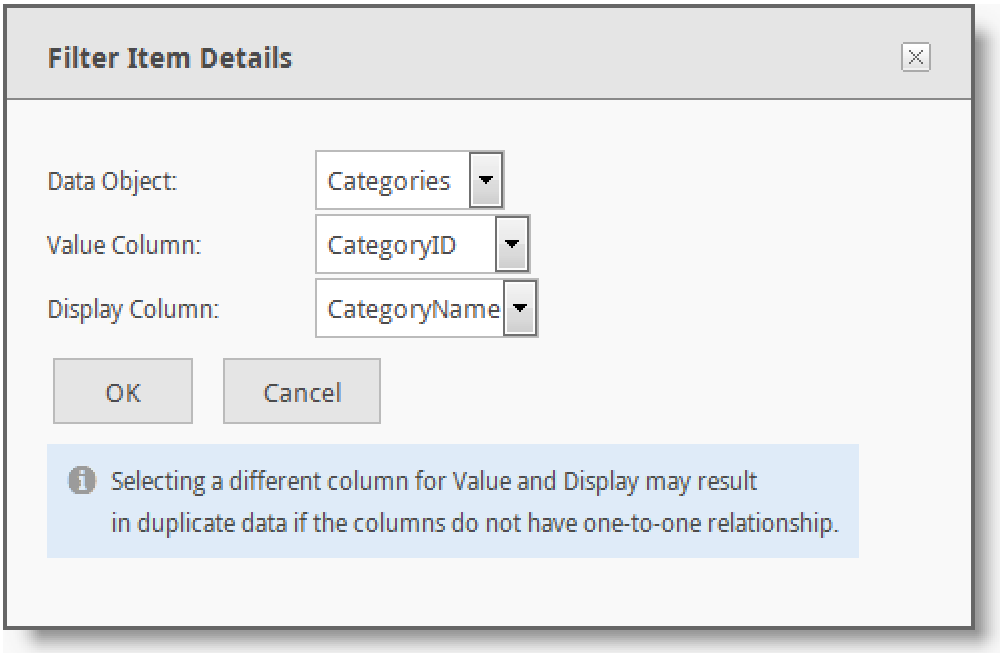
Click **Add** to define a new cascading filter. A blank *Cascading Filter* page will be displayed:



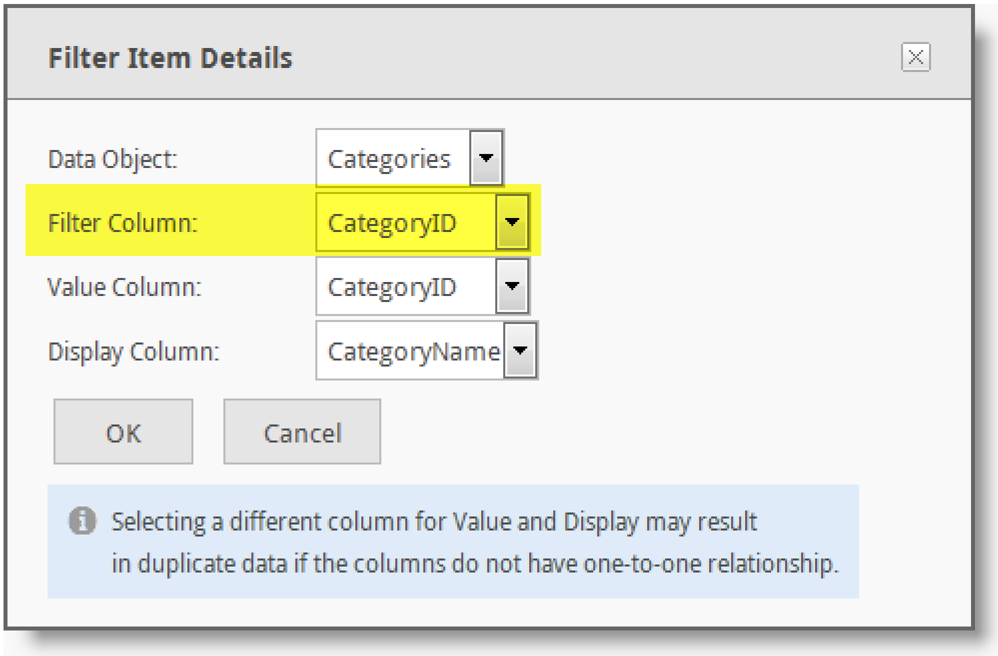
The *Database Connection* identifies the currently selected reporting database.

Enter a *Name* and *Description* (optional) for the cascading filter.

Click **Add** to create a filter item. If this is the first filter item, the following dialog box will be displayed:



If this is an additional filter item, the following dialog box will be displayed:



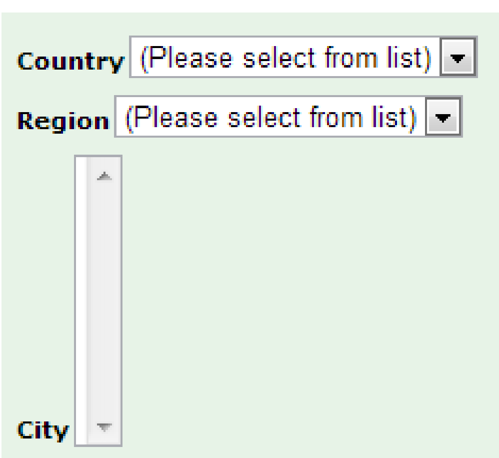
The difference between the two dialog boxes is the *Filter Column*. Since there are no filters applied to the first list of a cascading filter, this option is not displayed for the first cascading filter list.

Repeat the process of adding filter items until the cascading filter definition is complete.

Click **Delete** to remove the selected filter items. Filter items are selected by checking their checkboxes.

The definition of the filter item can be modified by clicking on the ✎ icon.

Click **Test Filter** to exercise the filter items and verify that the lists are properly populated. A preview page will be displayed similar to the following:



The cascading filter test will only exercises the filter. It doesn't accurately reflect the way the cascading filter will *look* in a report.

Click **Save** to save the cascading filter definition in the metadata database.

Here's an example of cascading filers at work. The following cascading filter definition was the basis for the **Test Filter** description above:

Data Object	Filter Column	Value Column	Display Column	Actions
Customers		Country	Country	
Customers	Country	Region	Region	
Customers	Region	City	City	

The first filter list is based on the "Country" column of the "Customers" data object. When the cascading filter is displayed, the first drop-down list will be populated with a list of the distinct countries found in the "Customers" data object. The list is unfiltered. The caption for the list will be "Country", the friendly name of that column. When the user selects one of the countries, the data in the "Country" *Value Column* will be passed to the next filter item.

The second filter list is based on the "Region" column of the "Customers" data object. When this list is displayed, the contents will be all of the distinct regions in the "Customers" table, filtered by the "Country" value selected from the previous list. The caption for the list will be "Region", the friendly name for that column. When the user selects a "Region", the data in the "Region" *Value Column* will be passed to the next filter item.

The last filter item is based on the "City" of the "Customers" data object. When this list is displayed, the contents will be a list of "Cities" filtered by the "Region" value selected from the previous list. When the user selects a "City", the corresponding "City" value will be used to filter the data in the report.

The *In cascading list* option will be displayed to the user building the report when the column that the parameter is based on is the "City" column.

Notes:
The Value Column and Display Column can be different.

The cascading filter can be based on multiple, related data objects.

Only the last filter item is used to filter the report. If the last filter Value Column was "City" and the user selected "Springfield", all records with a "City" of "Springfield" will be selected. The previous filter items are not considered.

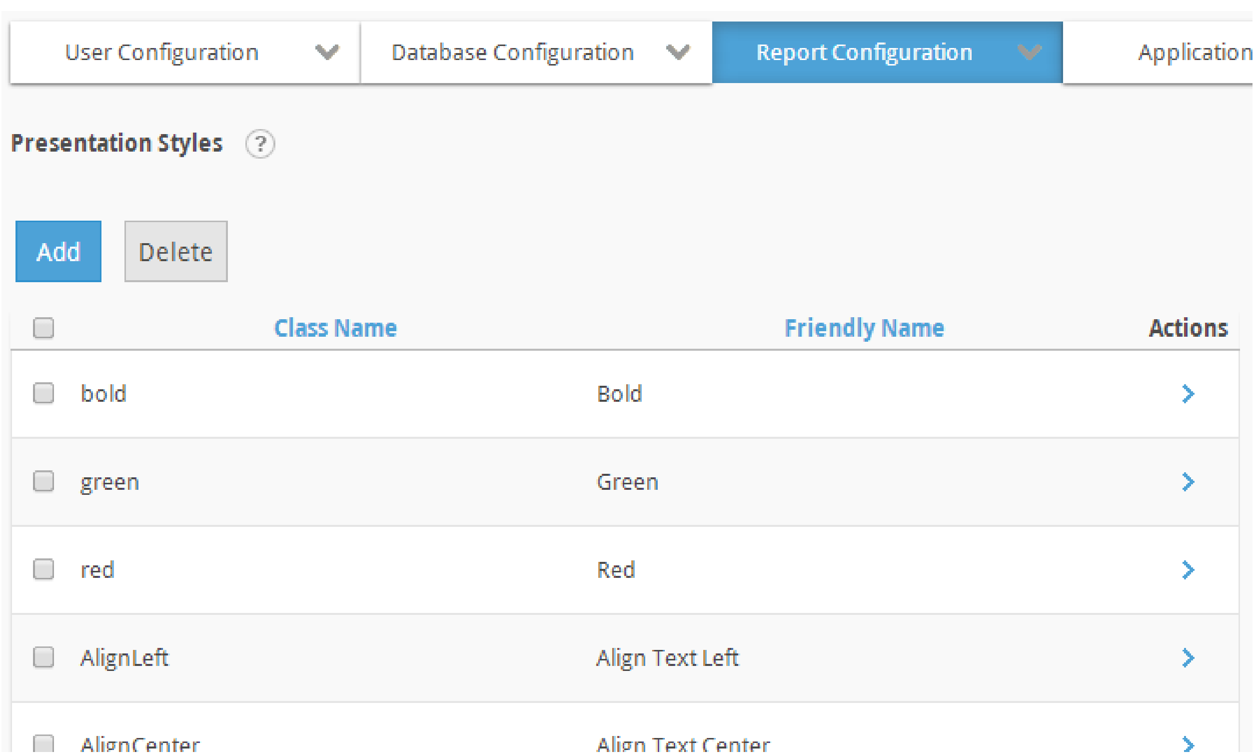
Presentation Styles

The Presentation Styles page allows System Administrators to manage Cascading Style Sheet (CSS) classes available for use when building reports. Presentation styles registered on this page are used for highlighting specific report labels, captions, and data points based on a given criteria.

Before registering a CSS class with the Ad Hoc instance, administrators must create the class and add it to every style sheet in the `_StyleSheets` folder. Adding the class to every style sheet ensures that all classes are available regardless of the report template selected from the Report Builder.

Note:
While you're creating and managing Presentation Styles, the default stylesheet will be used to present the class options. The default stylesheet is set in the *Configuration → Report Configuration → Report Settings* page's Default Template attribute.

Select **Presentation Styles** from the *Report Configuration* drop-down list to display the *Presentation Styles* configuration page:



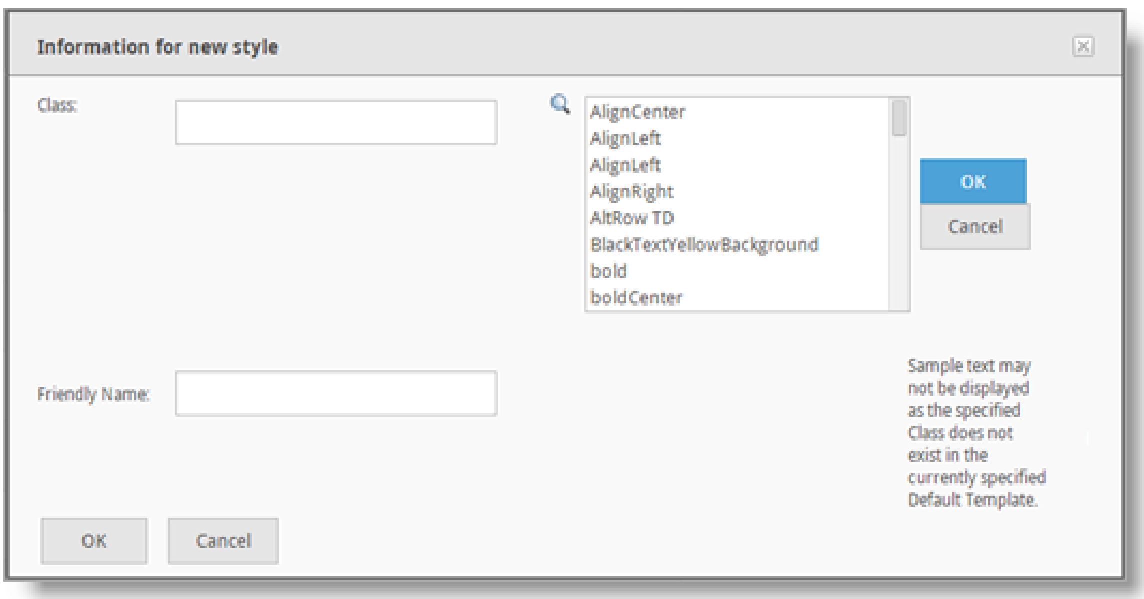
Click **Add** to display an empty *Presentation Style dialog box.*

Click **Delete** to remove the selected presentation styles. Presentation Styles are selected by checking their checkboxes.

The icon indicates that more than one action can be performed on the presentation style. Hover your mouse cursor over the icon to display the available actions: **Modify Presentation Style** and **View Dependencies**.

Adding a Presentation Style

To make a presentation style available to the end-user, click **Add**. The following dialog box will be displayed:



Select the class by clicking the icon. Enter a unique *Friendly Name* value and click **OK** to store the presentation style reference in the metadata database.

Modifying a Presentation Style

Modifying a style is necessary when the name of the class changes within the style sheet, or when administrators want to change what users see from the Report Builder. Modifying a style only changes its registration status in the Ad Hoc instance - the name of the class within the style sheet is not altered.

Hover your mouse cursor over the icon for a presentation style and select the **Modify Presentation Style** option from the list. Select the *Class* by clicking the icon. Enter a new, unique *Friendly Name* and click **OK** to save the revised presentation style reference in the metadata database.

Viewing Dependencies

Hover your mouse cursor over the icon for a presentation style and select the **View Dependencies** option from the list.

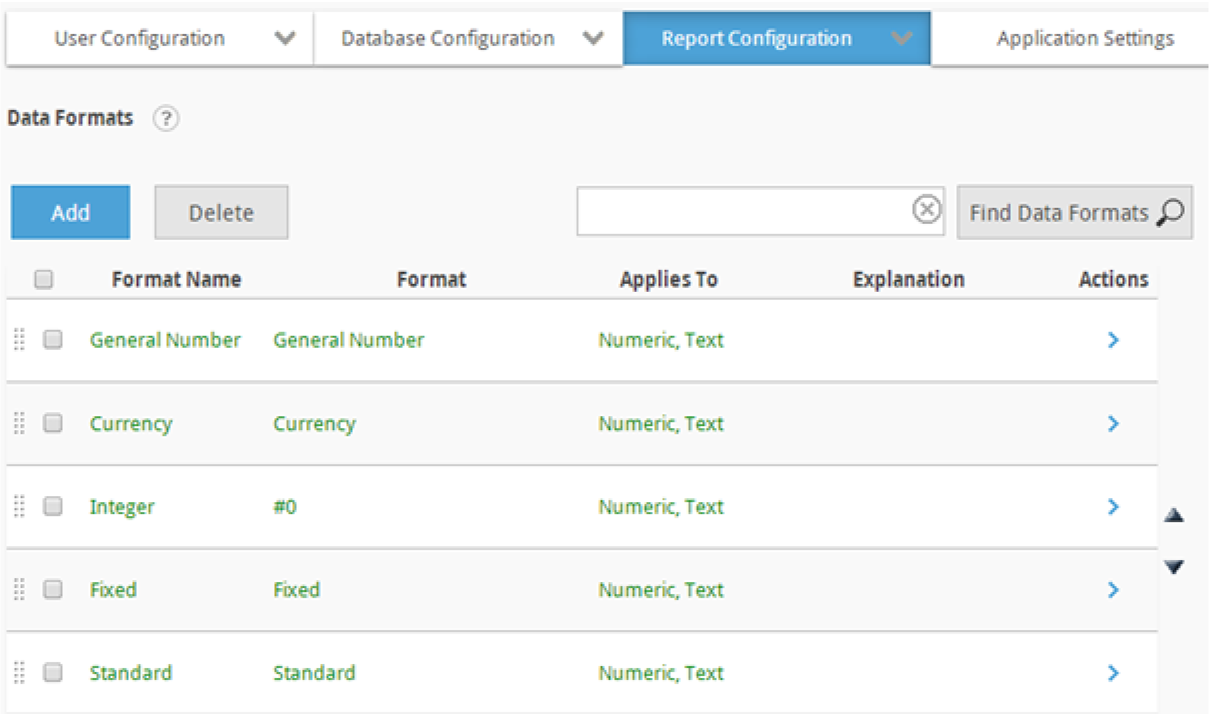
A report page identifying the scope and usage of the presentation style will be displayed. Administrators should view this page before modifying or deleting a presentation style, in order to determine the impact of the change.

Data Formats

The *Data Formats* page allows the System Administrator to manage data formats for use when specifying default column formats, or when building reports. By default, Ad Hoc is installed with 22 pre-defined data formats which are listed in the *Data Formats* page in a green font.

Data formats are available to end-users when specifying a column format in the Report Builder. The list of format options will be limited to those that apply to the data type of the column. The presentation order of the data format in the drop-down list matches the order on the Data Formats page.

Select **Data Formats** from the *Report Configuration* drop-down list to display the *Data Formats* configuration page:



Click **Add** to display an empty *Data Format dialog box.*

Click **Delete** to remove the selected user-defined data formats. Data Formats are selected by checking their checkboxes. The standard data formats distributed with Ad Hoc, displayed in green, cannot be deleted.

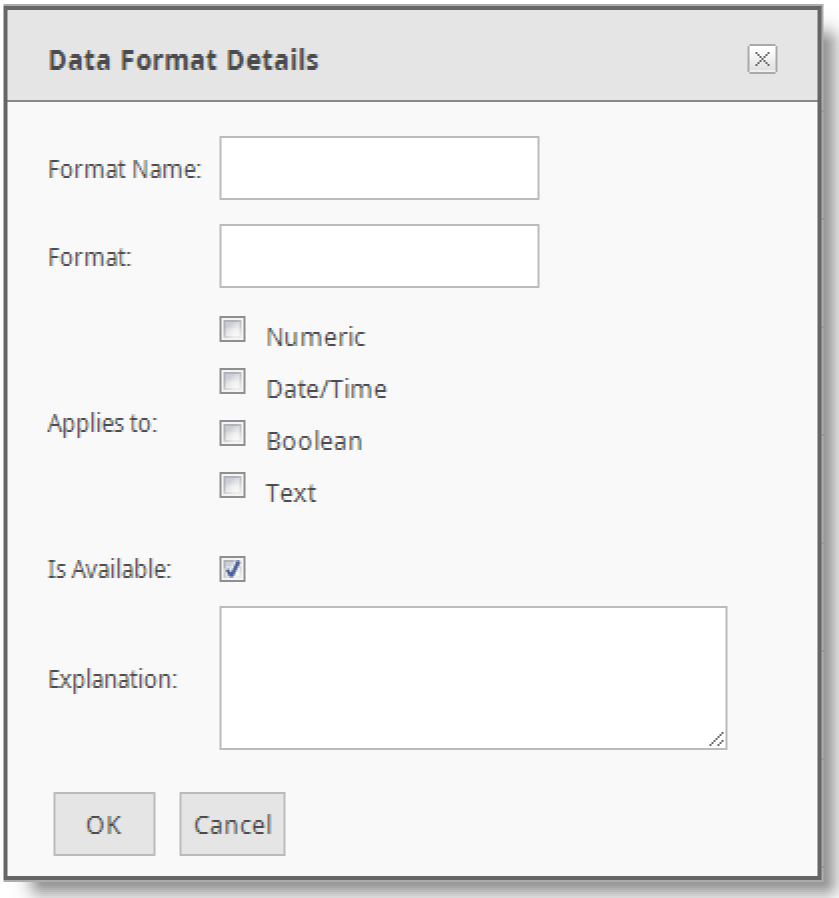
A search control may be displayed for the *Data Formats* page. Enter the search criteria in the textbox and click **Find Data Formats**. The search feature will look for formats based on a "contains"-type test. To clear the search criteria click the icon in the text box. The availability of the search feature is configurable, so it may not appear.

The presentation order of data formats in various lists follows the order of the data formats in the grid. The grid order can be adjusted by either using the drag-and-drop methods available or selecting a data format with the checkbox and clicking on the or arrows.

The icon indicates that more than one action can be performed on the data format. Hover your mouse cursor over the icon to display the available actions for a data format, which are **Modify Data Format** and **View Dependencies**.

Adding a Data Format

To create a user-defined data format, click **Add**. The following dialog box will be displayed:



The *Format Name* value will be displayed in the format lists available to the end-user.

The *Format* is the formatting character string. Refer to our Formatting Data document for additional details about this string.

Select one or more *Applies to* options. These identify the generic data types of the columns that the new data format might be applied to.

Check the *Is Available* checkbox to specify the visibility of the data format.

The *Explanation* is optional.

Click **OK** to save the data format in the metadata database. The data format will be available after the next login. Existing sessions will be unaffected.

Modifying a Data Format

Hover your mouse cursor over the icon for a data format and select the **Modify Data Format** option from the list. In the dialog box displayed, make the necessary changes and click **OK** to save the revised data format in the metadata database.

Reports using the old data format will have to be re-saved to acquire the revised format.

Viewing Dependencies

Hover your mouse cursor over the icon for a presentation style and select the **View Dependencies** option from the list.

A report page identifying the scope and usage of the data format will be displayed. Administrators should exercise this option before modifying or deleting a data format in order to determine the impact of changes.

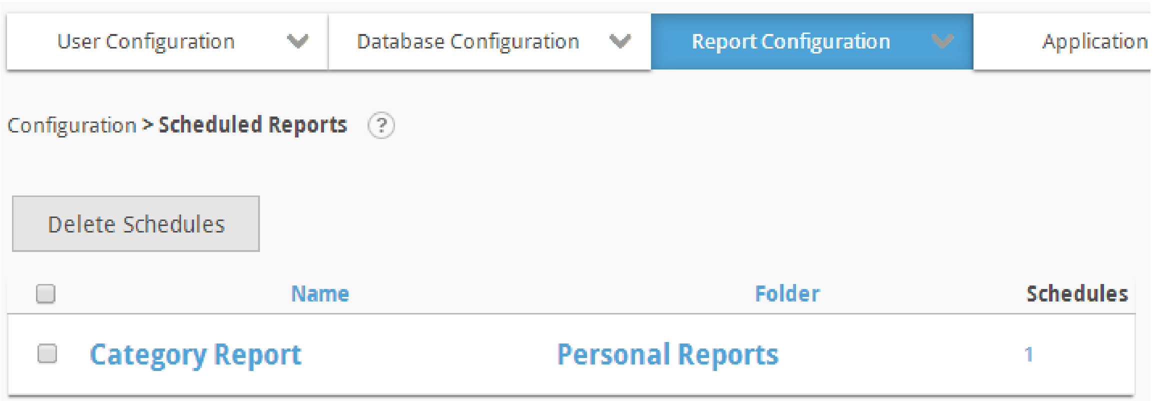
Scheduled Reports

The *Scheduled Reports* page allows System Administrators to view, modify and delete any schedule(s) created for an individual report. Additionally, the administrator can create additional schedules against any already scheduled report, subscribe users to receive the scheduled reports via email, and archive scheduled reports.

The scheduling process is flexible and easy to use, offering the ability to deliver reports as an email in HTML format, as an email attachment in PDF, Word, Excel, or CSV format, or as a link to the report in the archive directory on the server.

The scheduling process is described in detail in the *Report Builder Guide*. The primary purpose of the *Configuration → Report Configuration → Scheduled Reports* page is to centrally manage existing schedules. Creating a new schedule is typically implemented using the Report Builder.

Select **Scheduled Reports** from the *Report Configuration* drop-down list to display the *Scheduled Reports* configuration page:



The **Delete** button will remove the schedules for the selected report. Reports are selected by clicking the applicable checkbox.

Note:
Reports themselves are *not* deleted. Only the schedules for the report will be deleted.

A search control may be displayed for the *Scheduled Reports* page. Enter the search criteria in the textbox and click **Find Scheduled Reports**. The search will find reports based on a “contains” test. To clear the search criteria click the icon in the text box. The availability of the search feature is configurable.

The list of scheduled reports can be sorted by clicking on either the *Name* or *Folder* column header.

Click the report *Name* link to run the report.

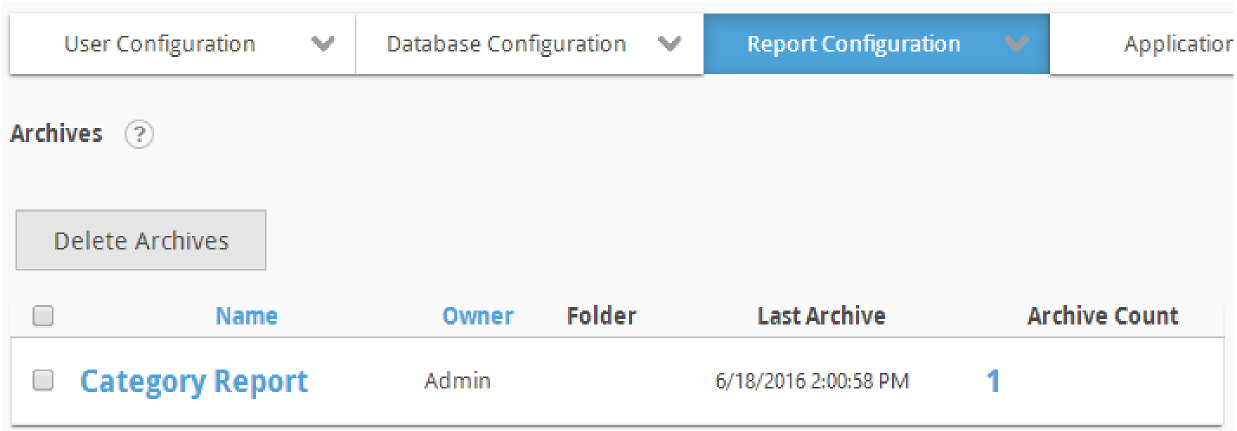
Click the *Folder* link to navigate to the folder containing the report.

Click the *Schedules* (count) link to view the schedules for the report. From that page, the administrator may create new schedules for the report, remove schedules, and modify schedule information.

Archives

The Archives page allows System Administrators to view the complete archive for any individual report. Administrators can delete an individual report from the archive or delete the entire archive. An archive “snapshot” can also be emailed.

Select **Archives** from the *Report Configuration* drop-down list to display the *Scheduled Reports* configuration page:



Note:
The *Archives* option will not be displayed unless archiving is enabled and at least one report for the current reporting database has been archived.

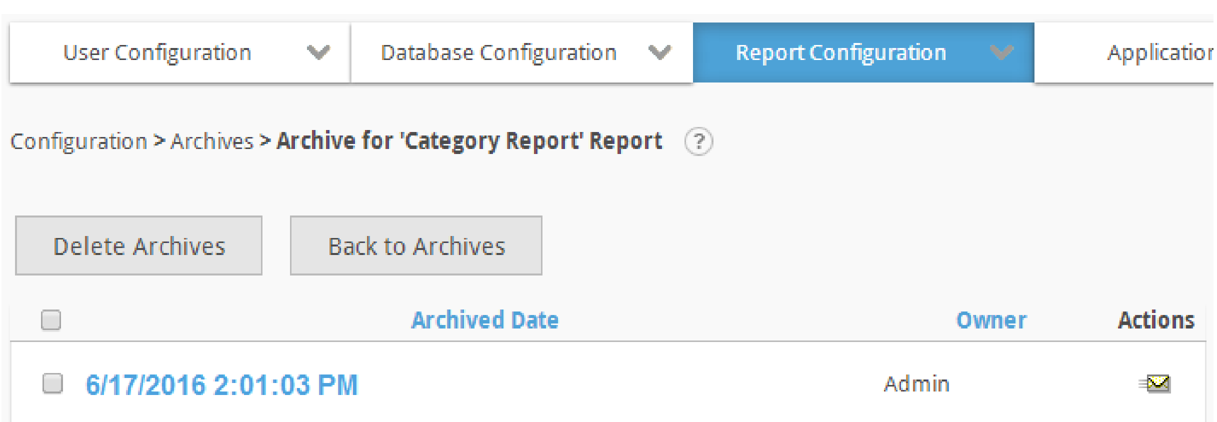
Click a report's name link in the *Name* column to view the report in a new browser window.

Click the number link in the *Archive Count* column to view all archives associated to the report.

Reports with archives can be sorted by clicking on the *Name* or *Owner* column header.

Click **Delete Archives** to remove all archives for a report. Archives are selected for deletion by checking their checkboxes. Click **OK** when prompted to confirm the deletion.

To view the archives associated to a report, click the number link in the *Archive Count* column next to the corresponding report. The Archive page will be displayed for the report:



Click the *Archived Date* or *Owner* column headers to sort the archive list.

Click the date link from the *Archived Date* column to view the archived report in a new browser window.

Click the icon to email the archive report. Enter a recipient address and subject, then click **Send** to email the report.

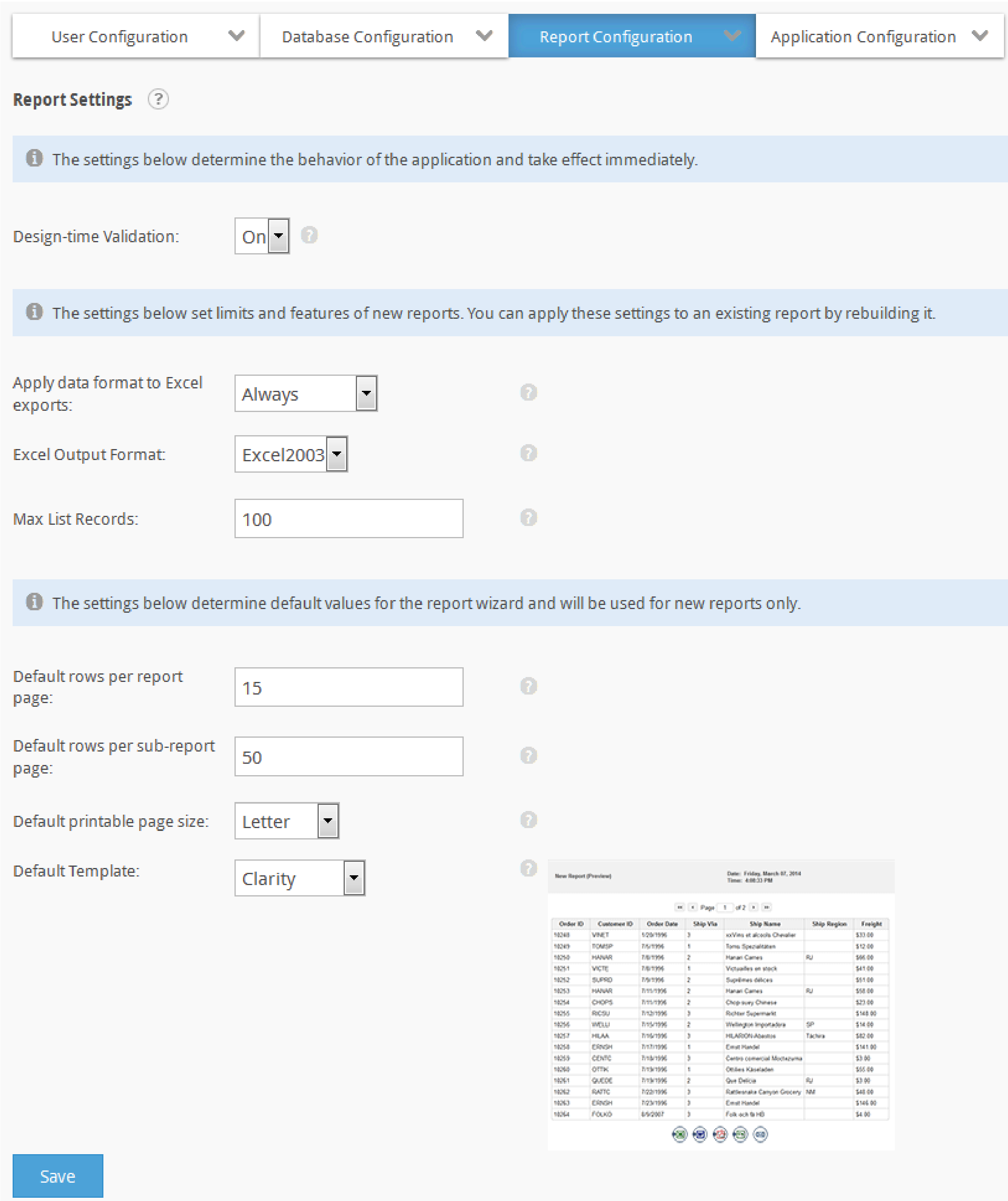
Note:
Archives can be centrally managed through the Management Console. Refer to the Management Console Usage Guide for details regarding managing the archive folders.

Report Settings

The *Report Settings* page allows the System Administrator to optimize report performance and appearance. Some settings determine the behavior of the application and take effect immediately, while others may only work for new or re-built reports.

Select **Report Settings** from the *Report Configuration* drop-down list to display the *Report Settings* configuration page.

The following is an example of the page when the *Active SQL* feature is enabled. See the *Special Application Settings* section of this document for more information about this feature.



Click the icon to display brief help text for each property.

Design-time Validation - This feature is built into several steps of the Report Builder to ensure that invalid values and bad syntax do not affect reports at runtime. Design-time validation improves usability by informing users of potential problems before they occur. Administrators can disable this functionality to improve the performance of the Report Builder but we do not recommend it.

Apply data format to Excel exports - This controls the formatting of columns when a report is exported to Excel. The following values can be selected from the drop-down:

- **Always**: The Excel columns will be formatted the same as the columns' data types.
- **Exclude Dates**: All columns will be formatted with the exception of Date/Time columns
- **Never**: All columns will be formatted as string – no type-specific formatting will be used.

Excel Output Format - Specifies the output format of the Excel file created. The extension for Excel 2003 files is `.xls` and for Excel 2007+ files it's `.xlsx`.

Max List Records[1] – Specifies the maximum number of records returned when using **In list** report parameters. We recommend keeping this number as small as possible to improve performance and keep drop-down lists manageable. Enter **0** (zero) to disable this feature. The maximum value is 64,000.

Default rows per report page – Specifies the default number of rows shown in the first layer of each report. From the Report Builder, the end-user has the option of overriding the default value in the Table Settings panel.

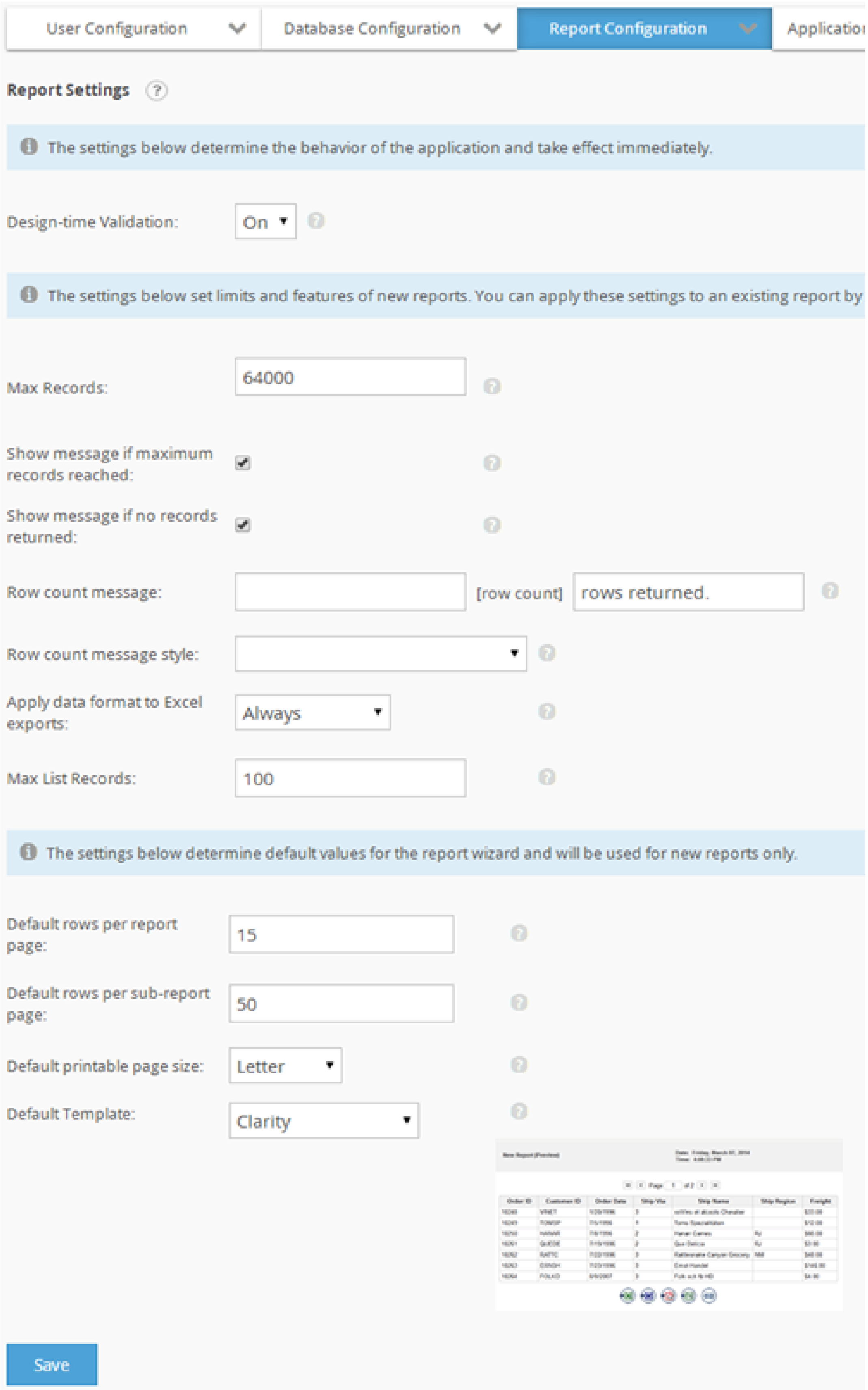
Default rows per subreport page – Specifies the default number of rows shown in the drill-down layers of grouped reports. From the Report Builder, the end-user has the option of overriding the default value in the Table Settings panel.

Default printable page size - Specifies the default page size selected for printable paging in reports.

Default Template – Specifies the default style sheet for each new report. This is also the style sheet that will be used to display and verify any new Presentation Styles.

Click **Save** to commit any changes.

The following is an example of the page when the *Active SQL* feature is disabled. See the *Special Application Settings* section of this document for more information about this feature. Only the attributes that haven't been previously discussed section are explained.


User Configuration
Database Configuration
Report Configuration
Applicatio
Report Settings
The settings below determine the behavior of the application and take effect immediately.
Design-time Validation:
On
The settings below set limits and features of new reports. You can apply these settings to an existing report by
Max Records:
64000
Show message if maximum records reached:
Show message if no records returned:
Row count message:
[row count]
rows returned.
Row count message style:
Apply data format to Excel exports:
Always
Max List Records:
100
The settings below determine default values for the report wizard and will be used for new reports only.
Default rows per report page:
15
Default rows per sub-report page:
50
Default printable page size:
Letter
Default Template:
Clarity
Save

Max Records - Specifies the maximum number of records returned for a report. The number specified applies to reports and sub-reports. Database performance is improved, but users may not see all the results in a report. Enter **0** (zero) to disable this feature. The maximum number is 64,000.

Show message if maximum records reached - Specifies whether or not a warning will be displayed in the report when more rows are returned than is allowed by the *Max Records* limit.

Show message if no records are returned - Specifies whether or not a warning will be displayed in the report when no rows are returned.

If the end-user chooses to show number of records returned in a data section, the *Row count message* will be displayed, with [row count] replaced with actual number of records.

Row count message appearance will apply the selected stylesheet class to the message.

Application Configuration

The Application Configuration option allows the System Administrator to set attributes that have "instance-wide scope". The attributes impact the way that the Ad Hoc interface behaves. From the Application Configuration option, the administrator can change:

- Application Settings – Attributes that affect the overall Ad Hoc instance.
- Session Parameters – Define session parameters and values (this configuration option will appear under *User Configuration* if the ability to define Organizations has been enabled).

Application Settings

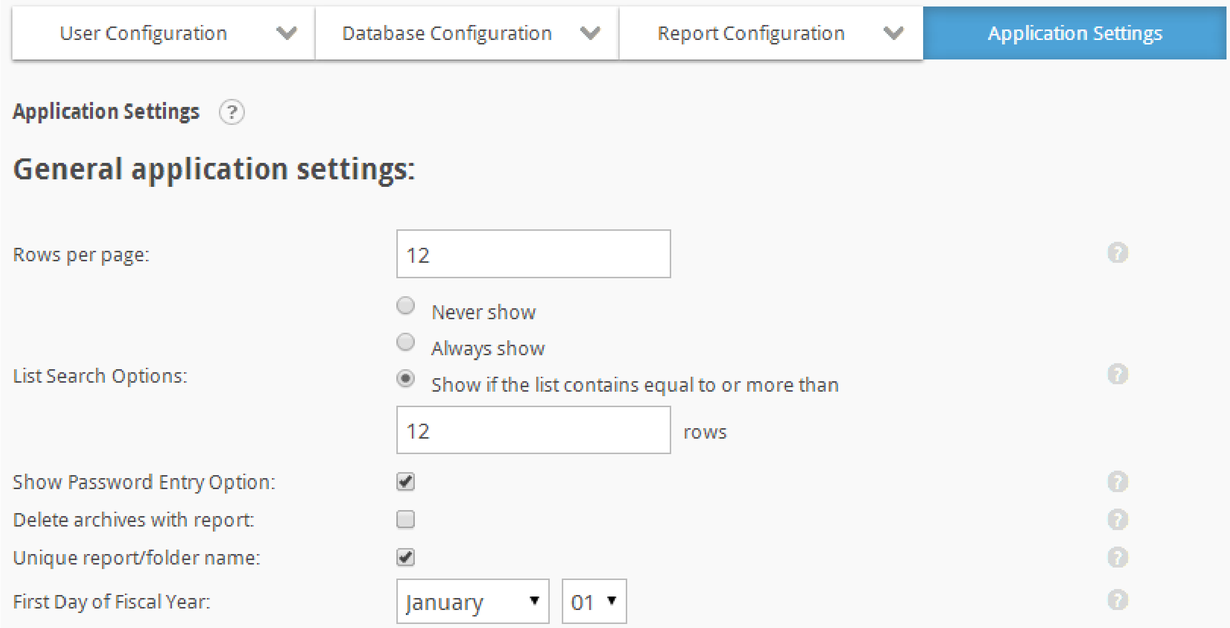
The *Application Settings* page allows the administrator to set general application and Report Builder settings. All application setting modifications will take affect with the next user login session.

Select **Application Settings** from the *Application Configuration* drop-down list to display the *Application Settings* configuration page.

Although it's displayed in a single page in Ad Hoc, the *Application Settings* page shown here is divided into separate sections for improved clarity.

Click the icon to display brief help text about any attribute.

General application settings



Rows per page – Specifies whether paging is performed on the grids in the user interface and how many rows will appear per page. A value greater than **0** turns the paging feature on and specifies the number of row per page. A value of **0** turns paging off and all rows are displayed in one list.

List Search Options - Specifies whether or not to include a search filter in pages with grids. If the “Show only…” option is selected, specify a value between 1 and 100 to display the Find feature when the specified value is exceeded.

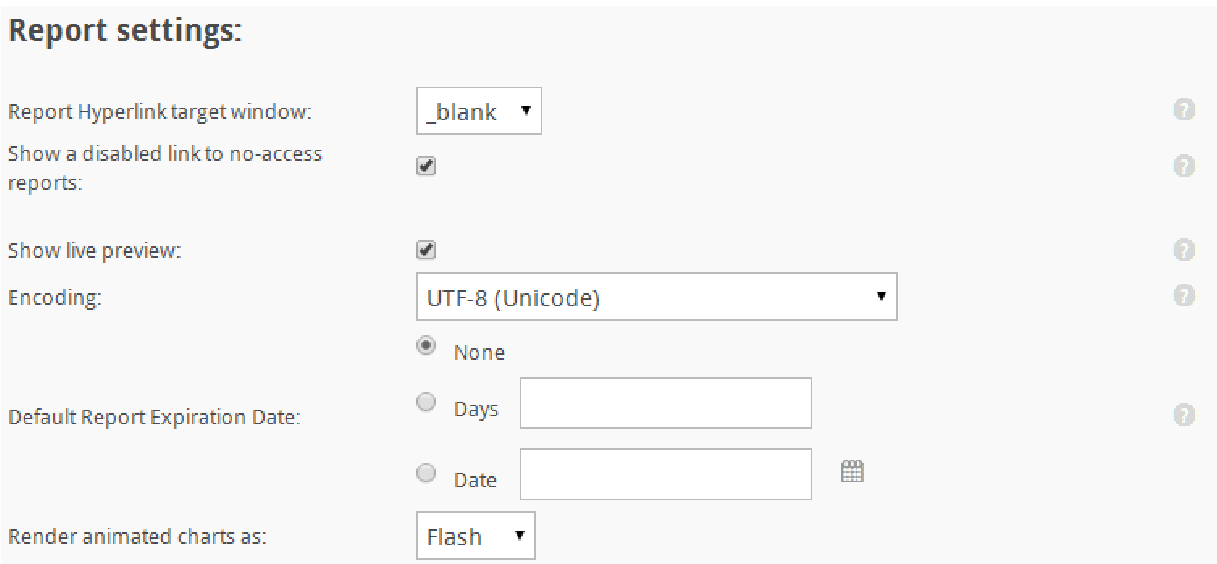
Show Password Entry Option - Specifies a user's ability to modify their password from within the application. If checked, users will be able to modify their passwords using the Profile page. Customers integrating a proprietary authentication schema within the application may want to disable password entry.

Delete archives with report - Specifies whether a report's Archives are automatically deleted when the report is deleted. If checked, the Archives for a report will be deleted if the report is deleted. Checking this option might result in decreased performance when a report is deleted. A backup of deleted reports and archives are located in the `_Definitions\_Reports\_Backup` folder.

Unique Report/Folder name - Specifies whether duplicate reports/folders are permitted in the instance. If this option is checked for an instance with duplicate items, a dialog box will be displayed to allow the duplications to be resolved.

First Day of Fiscal Year - Specifies the reference value for calculation of pre-defined date tokens of a “fiscal year” nature. Pre-defined dates are used in parameters throughout the application.

Report settings



Report Hyperlink target window - Specifies the target window for the hyperlinks to run the reports. The valid values can be:

- _blank (the default) - renders the report in a new window without frames.
- _parent - renders the report in the immediate frameset parent.
- _self - renders the report in the frame with focus.
- _top - renders the report in the full window without frames.

Show a disabled link to no-access reports - Specifies whether a user will be able to see a report to which they do not have access in report lists. If checked, reports will appear as a disabled link if the user does not have access to any of the objects or columns used in the report. If unchecked, the reports will instead be hidden.

Show live preview - Specifies the availability of the Live Preview panel in the Report Builder.

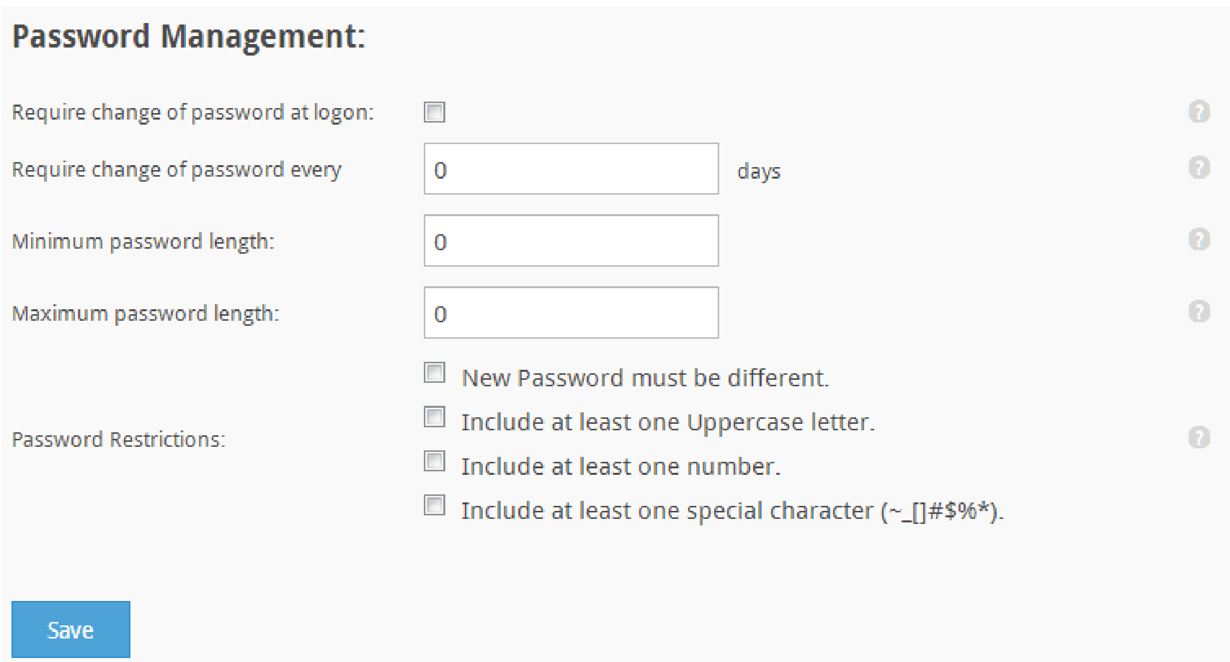
Encoding - Specifies the default character encoding for this application. The default value is `UTF-8 (Unicode)`.

Default Report Expiration Date - Specifies the when reports will automatically expire. The options are:

- None – no default value is set.
- Days – reports will expire a set number of days after creation.
- Date – reports will expire on a set date.

Render animated charts as - Specifies the technology to be used to display animated charts: Flash or HTML5.

Password Management



Require change of password at logon - Specifies if users will be required to change their password when they login for the first time and/or after a specified number of days.

Require change of password every n days - Specifies the number of a days before a user's password expires and they'll be required to change their password on login.

Minimum password length and *Maximum password length* - Specify the rules for the length of the password.

Password Restrictions - Specifies the required content (strength) of a password.

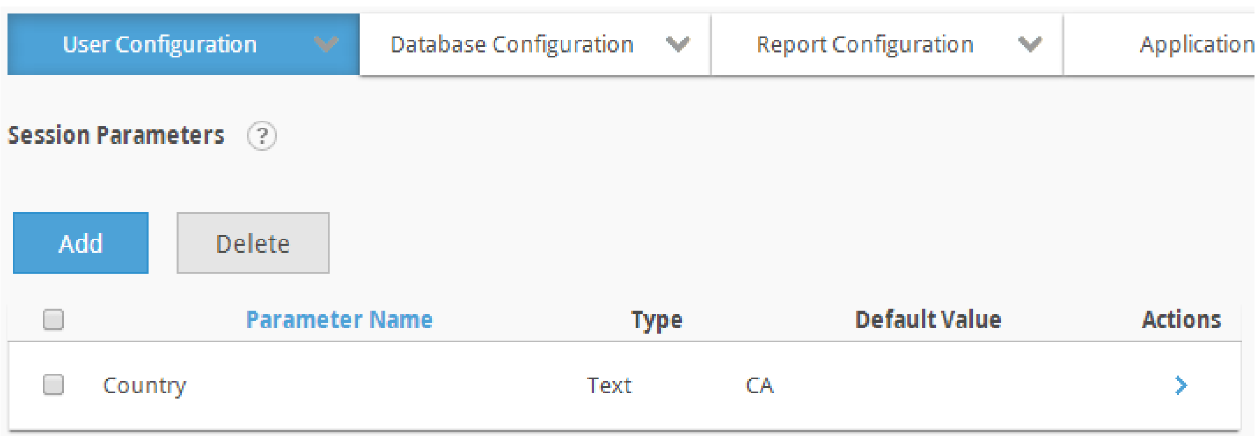
Click **Save** to save the attributes. The attributes on the *Application Settings* page are either stored in the `_Settings.lgx` file or in the metadata database, or impact records in the metadata database.

Session Parameters

The Session Parameters screen allows the System Administrator to create one or more *session variables.* The session parameters simply relate values to a name which can be used in a @Session token. They are commonly used in data object filters, but can be used throughout the Ad Hoc instance.

Session variables are part of the .NET Framework and hold a specific value for the duration of the user session. Each session variable is initialized with a specified value when users log in to the application. The value is either the default value set on this page, a value that has been set for the organization, or a value passed to the Ad Hoc instance from a parent application.

Select **Session Parameters** from the *Application Configuration* drop-down list to display the *Session Parameters* configuration page:



Click **Add** to display an empty *Session Parameter Details* dialog box.

Click **Delete** to remove the selected session parameter. Session parameters are selected by checking their checkboxes.

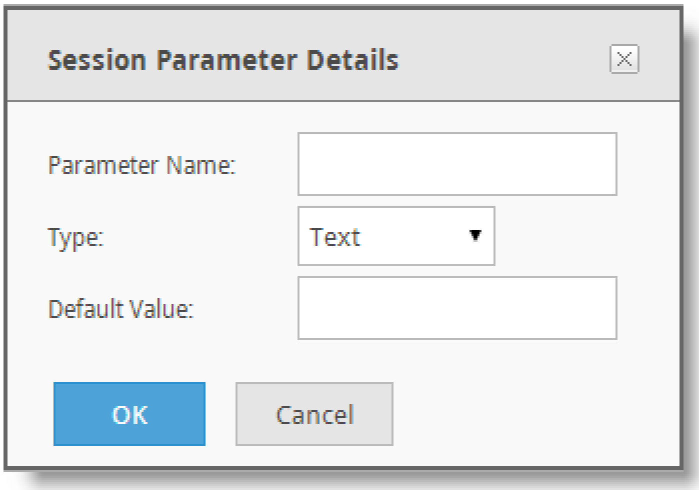
Click the *Parameter Name* column header to sort the list.

Note:
Number and Numeric List session parameters must have a default value.

The following syntax can be used to reference a session parameter:
`@Session.<parameter_name>~` where <parameter_name> must exactly match the session parameter name, including character case.

Adding a Session Parameter

To add a session parameter, click the **Add** button to open the following dialog box:



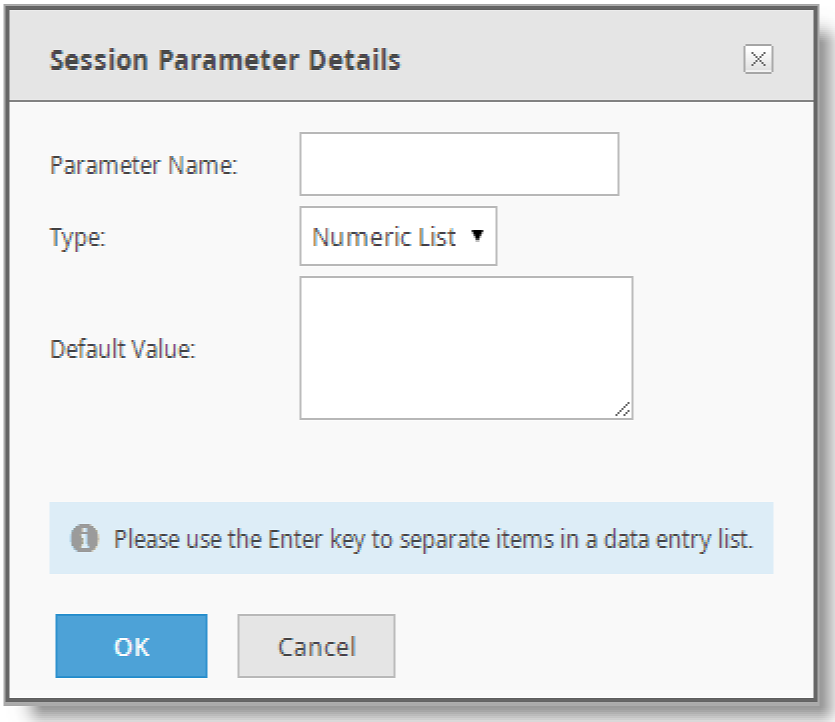
The *Parameter Name* value is the name by which the session parameter will be referenced throughout the application.

The *Type* value defines one of the parameter types recognized by Logi Ad Hoc. The *Type* will be used along with the usage context to determine which session parameters to display to the end-user. For example, “Text” session parameters should not be displayed as options in the Logi Ad Hoc user interface when the context clearly calls for a numeric or date value.

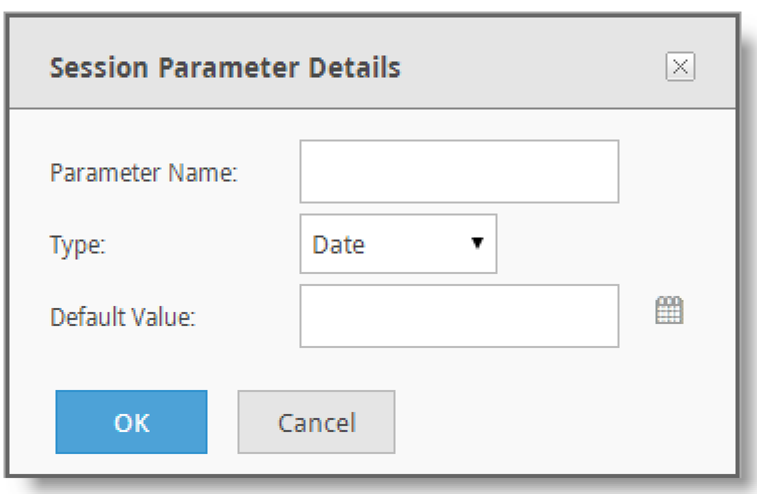
The *Type*s include:

- Date – The session parameter value is expected to be a date and the parameter will be available in date contexts.
- Number – The session parameter value is expected to be a number and the parameter will be available in numeric contexts.
- Numeric List – The session parameter value is expected to be a list of numbers and the parameter will be available for numeric “In List/Not In List” contexts.
- Text – The session parameter value is expected to be a string of characters and will be available in string contexts.
- Textual List – The session parameter is expected to be a list of string values and will be available for text based “In List/Not in List” contexts.

When one of the “list” types is selected, the dialog box will be adjusted to allow specification of a list of values, as shown below:



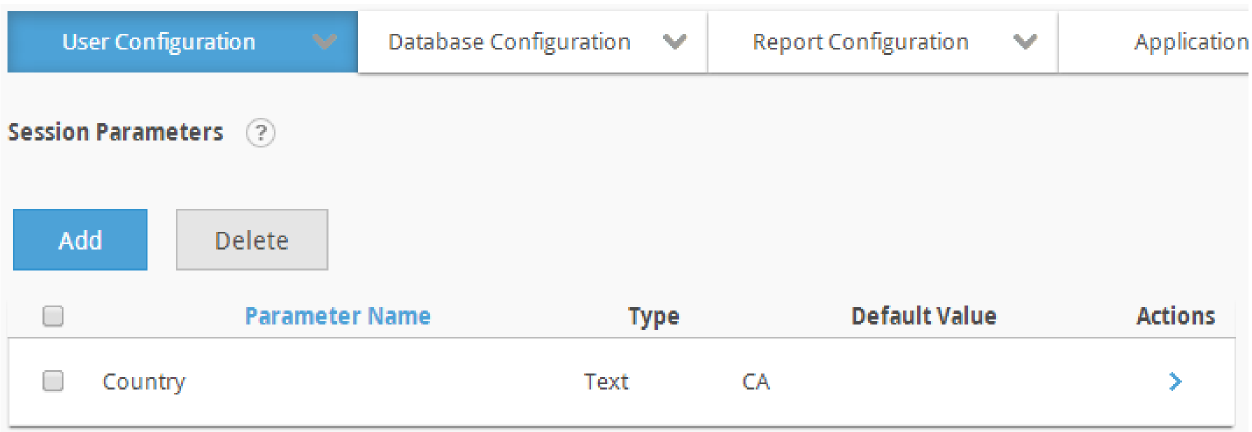
If a “Date” type is selected, the dialog box will be adjusted and a date picker control will be displayed as shown below:



The *Default Value* attribute, in the absence of any overrides based on Organization or User, will be supplied to the application when the session parameter is resolved during the execution of reports.

Modifying a Session Parameter

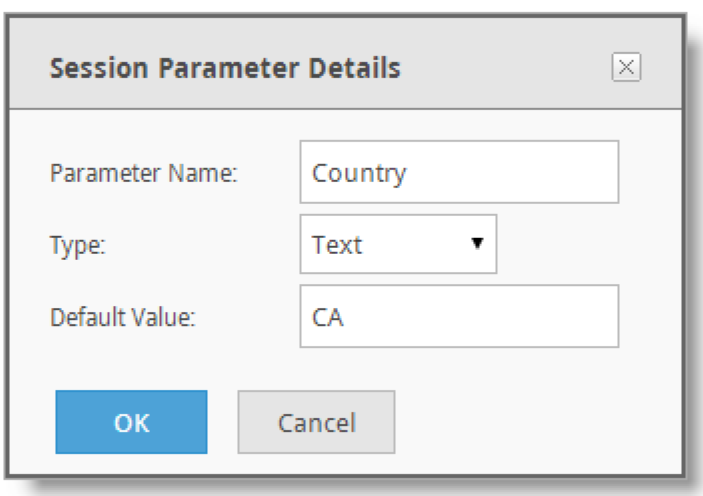
The Session Parameters page presents a list of session parameters similar to the following:



Session parameters can be sorted by clicking the *Parameter Name* column header.

Four actions are available for each session parameter: **Modify Session Parameter**, **Delete Session Parameter, Set by Organization**, and **Set by User**.

Selecting the **Modify Session Parameter** action will present a dialog box to capture the new session parameter value. For text and numeric type session parameters, the dialog box appears like this:

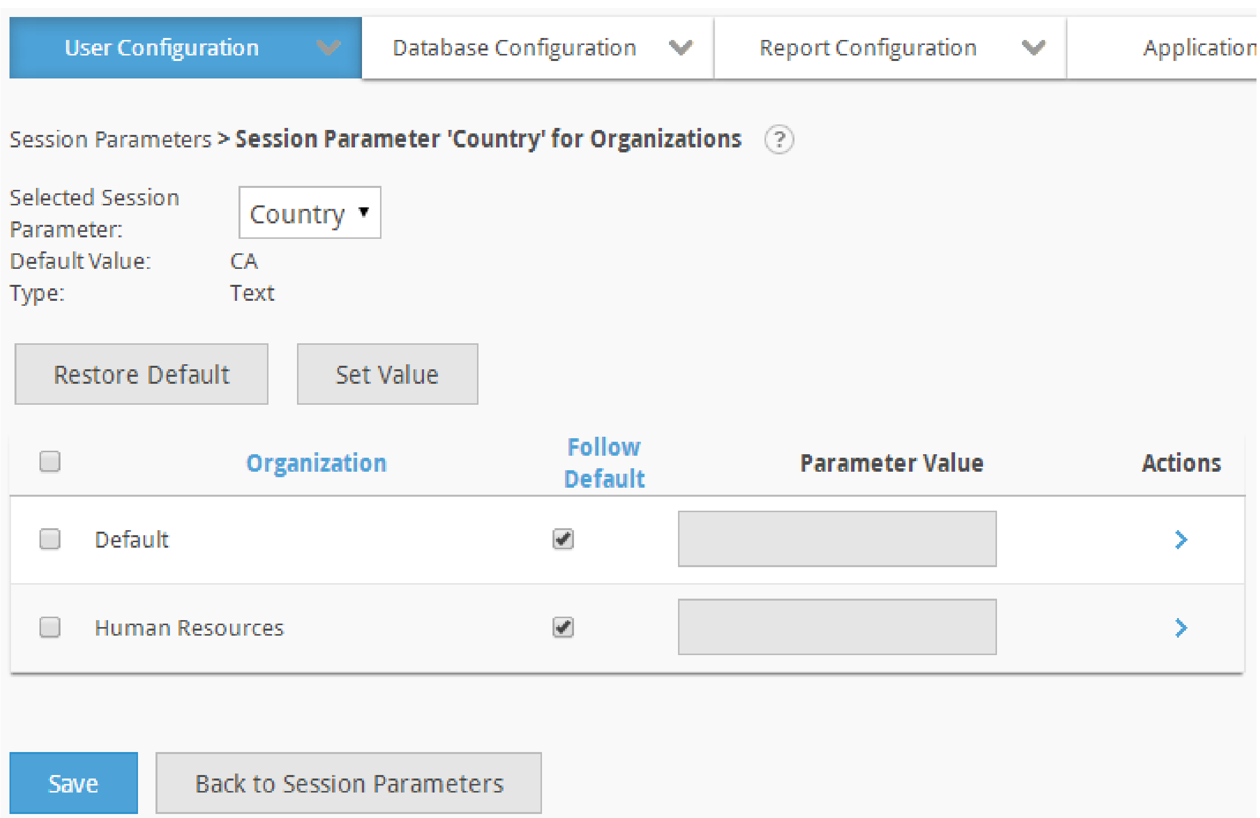


Edit the *Parameter Name*, *Type*, or *Default Value* values as desired and click **OK** to save the information.

Notes:
Changing the *Default Value* will change the attribute value for all Organizations and Users that are following the default values.

Any changes made are immediate and may affect the current session. It's not necessary to logout and re-establish the session to impact the current user. Other user sessions are not affected by the changes until the user's login.

Selecting the **Set by Organization** action will present a page similar to the following:



The *Selected Session Parameter* defaults to the session parameter that was used to navigate to the page. It's also a convenient method of switching the session focus for the page without having to return to the list of session parameters.

The *Default Value* and *Type* of the session parameter are displayed for informational purposes.

A list of organizations is displayed in a grid. The grid can be sorted by clicking on either the *Organization* or *Follow Default* column headers.

The **Restore Default** button will set the *Parameter Value* to the displayed *Default Value* for all selected Organizations.

The **Set Value** button will present a dialog box to capture a new value and apply the value to all of the selected Organizations.

The *Follow Default* checkbox specifies whether the parameter value should adopt the Default Value. This also allows the parameter value to be set “permanently”, meaning that changes to the *Default Value* will have no impact on the parameter value for the organization, if the *Follow Default* checkbox is unchecked.

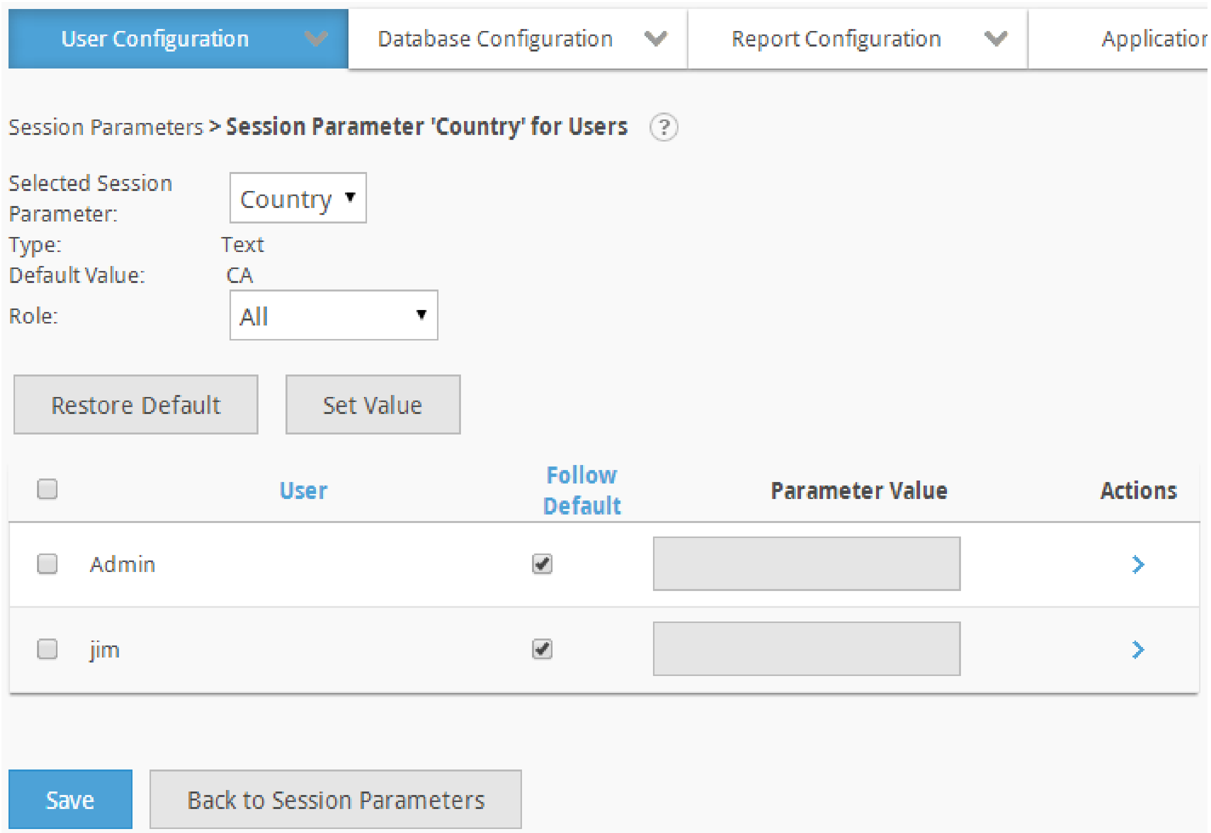
The grayed *Parameter Value* text boxes are not disabled. Their gray color is a visual cue that the value is the same as the default value and is expected to follow the default value. That means that if the default value changes, the organization will automatically pick up the new value.

The *Parameter Value* can be changed by either typing directly into the text box or selecting the **Modify** action and providing a new value. The parameter value may also be changed by selecting the **Restore Default** action.

Click **Save** to save the session parameter values for the Organization.

Note:
The **Set by Organization** action will not be displayed from the *Session Parameters* page if the Logi Ad Hoc instance has not been configured to allow the specification of Organizations.

Selecting the **Set by User** action will present a page similar to the following:



The *Selected Session Parameter* defaults to the session parameter that was used to navigate to the page. It's also a convenient method for switching the session focus for the page without having to return to the list of session parameters.

The *Type* attribute identifies the session parameter type: date, number, numeric list, text, or textual list.

The *Organization* drop-down list in the main menu (not shown) is used to filter the user list by their respective organization. The *Organization* drop-down list is only displayed in the page when the Logi Ad Hoc instance is configured to allow multiple organizations and when more than one organization exists.

The *Default Value* reflects the current default value for the session parameter. The actual value can be the original application scope session parameter value or the organization scope parameter value.

The *Role* drop-down list allows the list of users to be filtered by role.

A list of users is displayed in the grid. The grid can be sorted by clicking on either the *User* or *Follow Default* column headers.

Click **Restore Default** to set the *Parameter Value* to the displayed *Default Value* for all selected Users.

Click **Set Value** to display a dialog box to capture a new value and apply the value to all of the selected Users.

The *Follow Default* checkbox indicates whether the parameter value should adopt the *Default Value*. This also allows the parameter value to be set "permanently", meaning that changes to the *Default Value* will have no impact on the parameter value for the user, if the *Follow Default* checkbox is unchecked.

The grayed *Parameter Value* text boxes are not disabled. Their gray color is a visual cue that the value is the same as the default value and is expected to follow the default value. That means that if the default value changes, the user will automatically pick up the new value.

The *Parameter Value* can be changed by either typing directly into the text box or selecting the **Modify** action and providing a new value. The parameter value may also be changed by selecting the **Restore Default** action.

Click **Save** to save the session parameter values for the User.

Report Management

The System Administrator has the ability to manage reports for each user in every organization.

There are four main locations report storage:

- Personal Reports
- Shared Reports
- All Reports
- Global Reports

Personal Reports is the System Administrator's personal repository for storing reports and report folders.

Shared Reports is a “common” repository that allows users to share reports and report folders. System Administrators have complete control over shared reports for every user and organization.

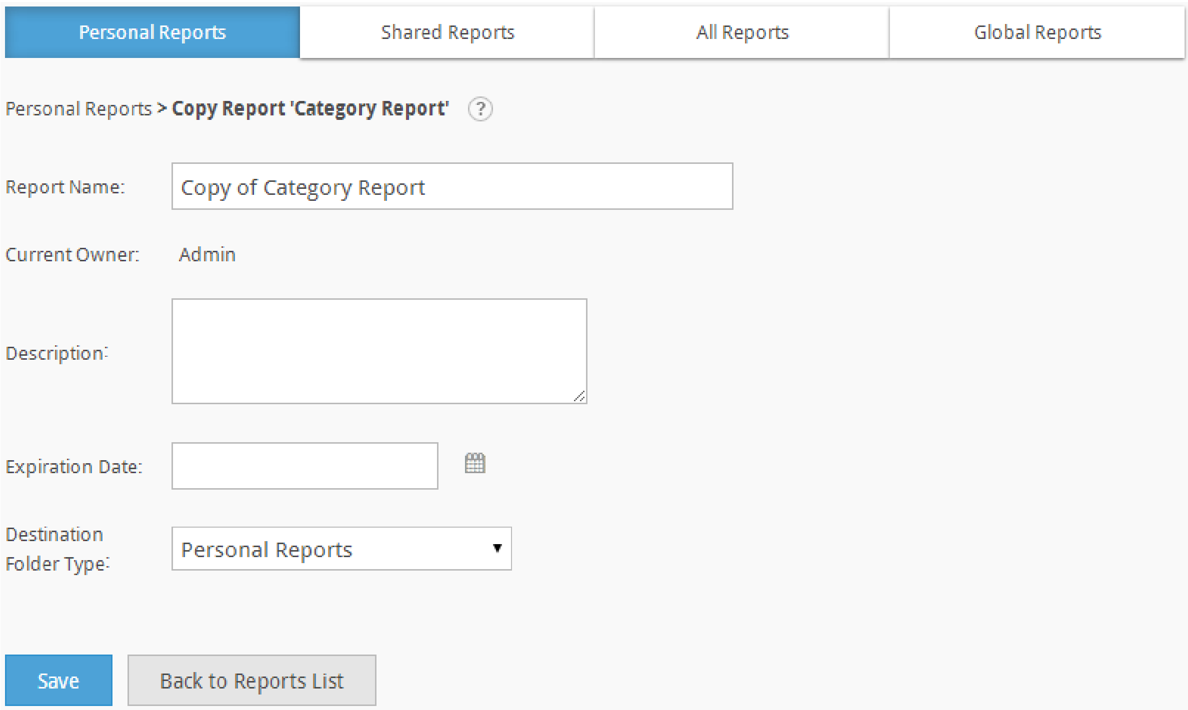
All Reports allows the System Administrator to view, copy, and schedule any report that exists in the Ad Hoc instance.

Global Reports is a “global” repository that allows the System Administrator to share reports across all organizations. Reports placed in the Global Reports area are visible to all users with the right to view the global reports area.

Sharing Any Report

Administrators have the ability to share reports with all end-users or with a specific end-user.

For example, the administrator can create a report demonstrating a particular reporting style or concept and share it with all users. Or administrators can build a report intended for a single user or user group.



To share a report with all users of a specific database connection:

1. Locate the report to be shared in the grid of reports.
2. Hover your mouse cursor over its icon to display the available actions and click the **Copy** or **Move** options.
3. OPTIONAL: If copying, then modify the *Report Name*, *Description* and *Expiration Date*[3].
4. If Organizations have been enabled, select *(All)* from the Organizations list.
5. Select *Shared Reports* for the desired destination folder type.
6. Click **Save** to share the report.

The report will be placed into the Shared Reports area of all the organizations currently listed in the organization drop-down list.

Notes:
The *Report Name* and *Description* can't be changed when moving a report.

When a report is copied, the report's name will be prefixed with "Copy of #" in order to distinguish them from the original. The "#" will only occur after a report is copied more than once.

An *Expiration Date* is used to designate when a time-sensitive report is deemed obsolete. The date must later than the current date.

Any corresponding report archives are not copied with the report. Report archives are only transferred when moving a report.

To share a report with users from a specific organization:

1. Locate the report to be shared in the grid of reports.
2. Hover your mouse cursor over the icon to display the available actions and click the **Copy** or **Move** options.
3. OPTIONAL: If copying, then modify the *Report Name*, *Description* and *Expiration Date*.
4. OPTIONAL: Select an organization from the *Organization* drop-down list.
5. Select *Shared Reports* for the desired destination folder type.
6. OPTIONAL: From the Folder tree, locate and select a folder to store the report in.
7. Click **Save** to share the report.

To share a report with a specific user:

1. Locate the report to be shared in the grid of reports.
2. Hover your mouse cursor over the icon to display the available actions and click the **Copy** or **Move** options.
3. OPTIONAL: If copying, then modify the *Report Name*, *Description* and *Expiration Date*.
4. OPTIONAL: Select an organization from the *Organization* drop-down list.
5. Select *All Personal Reports* for the desired destination folder type.

6. From the *New Owner* drop-down list, select a desired user.

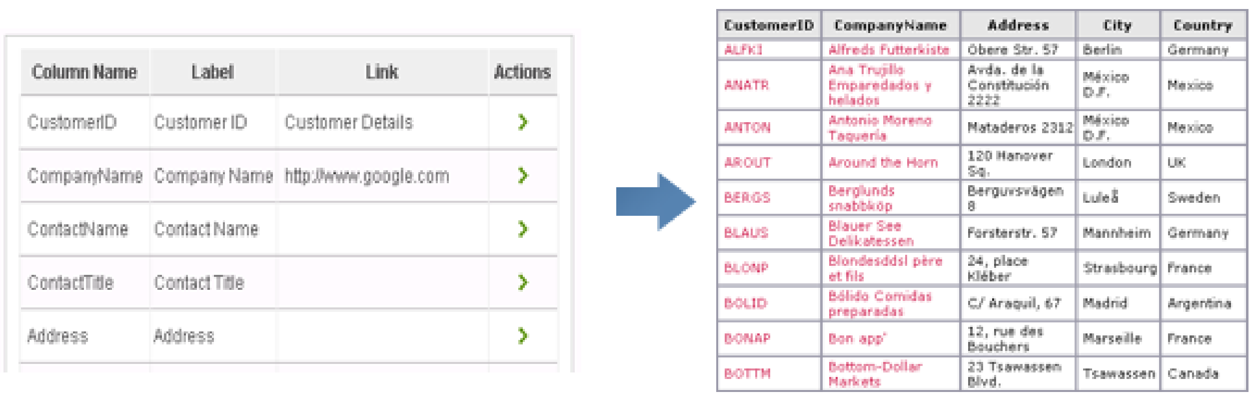
7. OPTIONAL: From the *Folder* tree, locate and select a folder to store the report in.

8. Click **Save** to share the report.

Linking Reports

Administrators have the ability to enable drill-through functionality by offering a hyperlink in one report (the “source” report) that launches the view of another report (the “linked” report).

When the hyperlink in the source report is selected, record-level specific data is passed from the source report to the linked report's respective parameters.



Linking two existing reports is a two-part process:

1. Create the linked report. Any report can be the target of a link.
2. Configure a link on a data object's column which can be enabled in a source report.

We do not recommend using “Ask pamaramters” in a linked report.

To configure a link on a data object column, refer to the **Setting Links** section of this document for information about setting up a link parameter to a report created in the application.

Users building reports have the option of disabling object links from the Report Builder.

Permission Packages

Permission packages are groupings of individual application rights that system administrators can assign to users. Administrators can create custom permissions or use the ones installed with the application. The following permission packages are installed with the application:

- **System Administration** - Allows every right in the application.
- **End-user** - View, create, modify, rename and delete personal reports and folders; archive personal reports; create reports in tabular, bar chart and pie chart presentation formats.
- **Power End-user** - View, create, modify, rename and delete personal reports and folders; archive personal reports; create reports in tabular, bar chart and pie chart presentation formats.
- **Manage Personal Reports** - View, create, modify, rename and delete personal reports and report folders; copying is allowed to any destination where "report creation" right exists.
- **View Personal Reports** - View personal reports; copying is allowed to any destination where "report creation" right exists.
- **Manage Shared Reports** - View, create, change, rename and delete shared reports as well as personal folders; copying is allowed to any destination where "report creation" right exists.
- **View Shared Reports** - View shared reports; copying is allowed to any destination where "report creation" right exists.
- **Manage All Personal Reports** - View, create, change, rename and delete all reports as well as personal folders; copying is allowed to any destination where "report creation" right exists.
- **Schedule and Archive Reports** - Schedule and archive any reports that are available to view as well as viewing of archived reports.
- **Access Configuration Area** - Access the configuration menu and its underlying sub-menus.
- **Administer User's Group** – Grants administrative rights in report management area plus user management in configuration for the user's group.

Users can have multiple assigned permissions assigned to them.

The following table shows the complete set of *Report Management* rights with respect to permission packages:

	Permission Packages									
Report Management	System Administration	Enduser	Power Enduser	Manage My Personal Reports	View My Personal Reports	Manage Shared Reports	View Shared Reports	Manage All Personal Reports	Schedule and Archive Reports	Administer User's Group
Archive reports	✓								✓	✓
Create/Modify/Delete all reports from Shared Reports area	✓					✓				✓
Create/Modify/Delete folders from Global Reports area	✓									
Create/Modify/Delete folders from My Personal Reports area	✓	✓	✓	✓						✓
Create/Modify/Delete folders from Shared Reports area	✓					✓				✓
Create/Modify/Delete own folders from Shared Reports area	✓					✓				✓
Create/Modify/Delete own reports from Shared Reports area	✓					✓				✓
Create/Modify/Delete reports from Global Reports area	✓									
Create/Modify/Delete reports from My Personal Reports area	✓	✓	✓	✓						✓
Delete archives from My Personal Reports area	✓	✓	✓	✓						✓
Delete archives from Shared Reports area	✓					✓				✓
Delete archives in All Personal Reports area	✓							✓		✓
Manage user group reports	✓									
Manage user Preferences	✓	✓	✓	✓	✓	✓	✓	✓		✓
Modify/Delete folders in All Personal Reports area	✓							✓		✓
Modify/Delete reports in All Personal Reports area	✓							✓		✓
Rename reports from All Personal Reports area	✓							✓		✓
Rename reports from Global Reports area	✓									
Rename reports from My Personal Reports area	✓	✓	✓	✓	✓					✓
Rename reports from Shared Reports area	✓					✓				✓
Right to add bar charts to reports	✓	✓	✓							✓
Right to add calculated columns to reports	✓		✓							✓
Right to add crosstab to reports	✓		✓							✓
Right to add heatmaps to reports	✓		✓							✓
Right to add images to reports	✓		✓							✓
Right to add line charts to reports	✓	✓	✓							✓
Right to add pie charts to reports	✓	✓	✓							✓
Right to add scatter charts to reports	✓		✓							✓
Right to add Send Mail button to reports	✓		✓							✓
Right to export reports to CSV format[3]	✓		✓							✓
Right to export reports to Excel format[3]	✓		✓							✓
Right to export reports to MS Word format[3]	✓		✓							✓
Right to export reports to PDF format[3]	✓		✓							✓
Right to export reports to XML format[3,4]	✓		✓							✓
Right to set advanced settings for charts	✓		✓							✓
Right to set URL for an image	✓									✓
Right to upload images from client	✓									✓

Report Management	Permission Packages									
	System Admin-istration	End-user	Power End-user	Manage My Personal Re-ports	View My Personal Reports	Manage Shared Re-ports	View Shared Re-ports	Manage All Personal Re-ports	Schedule and Archive Reports	Administer User's Group
Right to view dependencies	✓									✓
Schedule reports from All Personal Reports area(5)	✓								✓	✓
Schedule reports from My Personal Reports area(5)	✓								✓	✓
Schedule reports from Shared Re-ports area(5)	✓								✓	✓
Subscribe to Scheduled Reports	✓		✓						✓	✓
View archived reports	✓								✓	✓
View report owner's name	✓									✓
View reports in All Personal Reports area	✓							✓		✓
View reports in Global Reports area	✓									
View reports in My Personal Reports area	✓	✓	✓	✓	✓					✓
View reports in Shared Reports area	✓	✓	✓			✓	✓			✓

Notes:
The "Right to export reports to…" Rights also control the ability of a user to initiate the export of a rendered report in the specified format.

Users assigned the "Right to export reports to XML format" Right may or may not have access to the feature based on the overall setting for this feature in the Application Settings page.

The "Schedule reports from…" Rights automatically allow the user to subscribe to scheduled reports.

The following table shows the complete set of *Configuration* rights with respect to permission packages:

	Permission Packages		
Configuration	System Administration	Access Configuration Area	Administer User's Group
Manage application settings	✓		
Manage archived reports	✓	✓	✓
Manage cascading filters	✓		
Manage data formats	✓	✓	
Manage data objects	✓	✓	
Manage permissions	✓		
Manage presentation styles	✓	✓	
Manage relationships	✓	✓	
Manage report settings	✓	✓	
Manage roles	✓		
Manage scheduled reports	✓	✓	✓
Manage user groups	✓		
Manage users	✓		✓
Manage virtual views	✓	✓	

Special Application Settings

This chapter describes special application functionality that System Administrators can configure. The application settings listed in this chapter must be enabled or disabled by setting an attribute value in the application's `_Definitions/_Settings.lgx` file definition.

The following attributes can be set in the **Constants** element:

- **ahFormatExcel**

  Set this attribute to enable or disable the formatting of column data as text when exporting to the Excel format. By default, the attribute value is *True* and thus exported data is formatted as per the specified display format or defined data type.

  Example: `<Constant ahFormatExcel="False" />`

  When this attribute is enabled, only new or modified reports will be affected.

- **ahHideConnection**

  Set this attribute to hide all database connection strings in the connection field of the Database Administration and Manager Utilities.

  Example: `<Constants ahHideConnection="True" />`

- **ahServerCSV**

  Set this attribute to enable the server-side “Export to CSV” plug-in, which allows a report to be viewed without row limits on the query and generates a CSV file that can be saved wherever. Caveats: The report must have only one data table and use a SQL Server or Oracle query.

  Example: `<Constants ahServerCSV="True" />`

- **DefaultDateReformat**

  Set this attribute to configure the date format for pre-defined dates (e.g., First Month End, Last Month End, etc.) to comply with the standard ISO format of "yyyy-MM-dd".

Example: `<Constants DefaultDateReformat="yyyy-MM-dd" />`

- **rdMemoryStreamLimit**

  Set this attribute to adjust the “memory-caching to file system-caching” threshold, in megabytes. A value of 0 will force all caching to the file system; a value of 2048, the maximum, will force all caching to memory. The default value is "10".

  Example: `<Constants rdMemoryStreamLimit="8" />`

The following attribute can be set in a **General** element:

- **LogErrors**

  Set this attribute to write debug HTML files to the `rdErrorLog` folder when there is a system error. These pages are the same as those shown when Debugger Style is set to "Debugger Links" or "Error Detail".

  Example: `<General LogErrors="True" />`

The following attribute can be set in a database **Connection** element:

- **ahDBType**

  Set this attribute to specify the specific database type to use. The default is blank. The list of available values is:

CACHE	INFORMIX	SYBASE
DB2	ORACLE	
DB2AS400	SQLSERVER	

Example:
```
<Connection ID="3" Label="DB2" Connection-String="Provider=IBMDA400.DataSource.1;Password=PWD;Persist Security In-fo=True;User ID=LOGIADHOC;Data Source=123.345.678.900;Initial Catalog=*SYSBAS;Catalog Library List=LOGI;Convert Date Time To Char=FALSE" Type="Application" ahDBType="DB2AS400" />
```

The following attribute can be set in the Globalization element:

- **FirstDayOfWeek**

  Set this attribute to change how the first day of the week is determined when a report is executed. By default, Sunday is the first day of the week. This attribute can be set to a number representing a different day of the week. Since this is a global setting, it will affect all reports.

0 = Sunday	3 = Wednesday	6 = Saturday
1 = Monday	4 = Thursday	
2 = Tuesday	5 = Friday	

  Example: `<Globalization FirstDayOfWeek="1" />`

The following attributes can be set in the Ad Hoc element:

- **Device**

  Set this attribute to enable detection of a mobile device and restrict the reports list to mobile reports only. Valid attribute values are:

  - **PC** – (Default) Specifies that the reports list should be rendered identically to the list on the personal computer.
  - **Tablet** or **Phone** – Specifies that the mobile device is a tablet/phone and that the report lists should be restricted to mobile reports.
  - **Detect** – Specifies that the system should detect the device type and if a mobile device restrict the report lists to mobile reports.

- **ahShowNonAskReportParams**

  Setting this attribute to *True* will display both ask and non-ask parameters in the report filter. If set to *False* the non-ask parameters will not be shown. This attribute helps resolve the case of nested report filters using a combination of ask and non-ask parameters where the parenthetical indicators might become mismatched and appear illogical.

- **ahUseActiveSQL**

  Set this attribute to *True* to generate ActiveSQL datalayers in the report. Set it to *False* to generate the standard SQL datalayers. If ActiveSQL is enabled, there are a number of Ad Hoc features that are impacted, such as:

  - Statistical Columns
  - Crosstab extra label and value options
  - Ability to use stored procedures

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