Logi Ad Hoc Reporting
Internationalization Guide

Logi ANALYTICS

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INTRODUCTION

This guide is intended for administrators interested in localizing a Logi Ad Hoc Reporting installation.

The guide is not intended to be exhaustive in nature, but should give the reader a feel for the process, details regarding string usage within the application, and guidance to ensure the best possible result.

The Logi Ad Hoc software design provides the ability to localize or customize the application *without recompilation* through an internal and external architecture.

Internally, development was done using of the Microsoft Windows Globalization framework, which helps minimize issues related to internationalization. Externally, "resource" files have been used extensively to provide the optimum mechanism for localization.

In the application's context, resource files contain an internal "resource name" that identifies a "text string". These "text strings" may appear as column headings, button labels, list options, navigation elements, or in numerous other placed within the user interface. We provide tools to assist in the identification and translation of the "text strings" into other languages.

Localization Factors

Our design relies on browser, database, and operating system (OS) support to complete the localization process. In any localization process, special attention must be paid to the handling of dates, time, currency, sorting, and user interface (UI) issues. Most of these are handled properly by the underlying delivery mechanisms of the OS, database, and browser settings. The notable exception is the UI.

The UI can be dramatically affected when using the translated text strings. String length is a common issue affecting the UI. Users expect labels, headings, etc. to fit on the page in a visually-appealing manner and it's one of the challenges that a localization expert must overcome.

Resource File Hierarchy

There are generally two types of resource files: *Local* and *Global*.

Local resource files are specific to a single web page, master page, or user control. The resources in these files can be used only for that web file. These resource files are stored in the instance's special `App_LocalResources` folder. A local resource file is named after the web

file; for example, the resource file for the *Home.aspx* web page could be *Home.aspx.resx*, *Home.aspx.es-mx.resx*, and so on.

Note:
Each sub-folder of the web site can have its own `App_LocalResources` folder.

The resources in a global resource file can be read from any page or code in the web site and are saved in the special folder `App_GlobalResources`. Any *.resx file that is in this folder has global scope.

Within the local and global hierarchy are language specific conventions for resource files. In Table 1 - Example of a Resource File Resolution Hierarchy, "LocalizedText" is not only the name of a web file, it may also be considered a "base class" for the resources.

When the browser attempts to display a text string, it uses the browser language settings (Mexican - Spanish in our example) to start the search for the proper resource. Given the "resource name" for the resource and the language configured in the browser, the following hierarchy is used to resolve the text string:

Resource File	Usage
Page-Based Resources:	
`App_LocalResources/LocalizedText.es-mx.resx`	Use the Mexican, Spanish resource file specific to the web page
`App_LocalResources/LocalizedText.es.resx`	Use the Spanish resource file specific to the web page
`App_LocalResources/LocalizedText.resx`	Use the default resource file specific to the web page
Application-Based Resources	
`App_GlobalResources/LocalizedText.es-mx.resx`	Use the Mexican, Spanish resource file for the web site
`App_GlobalResources/LocalizedText.es.resx`	Use the Spanish resource file for the web site
`App_GlobalResources/LocalizedText.resx`	Use the default resource file for the web site

Table 1 - Example of a Resource File Resolution Hierarchy

Note:
Not all files have to exist but, at a minimum, a global default resource file is required for the application to function properly.

The Localization Process

The process of localizing the application is facilitated by the Internationalization option accessed from the Management Console's *Tools* action group.

> **Note:**
> Resource files were managed by the Resource Manager in Ad Hoc versions prior to 10.0.50. The functionality of the Resource Manager has been incorporated in the Management Console under Tools/Internationalization. The dialogs presented under this option continue to reference "Resource Manager". Both terms, "internationalization" and "resource manager", are referring to the same dialogs and functions.

The Internationalization option allows the user to 1) identify the target language, 2) identify all of the resource files that the application uses, and 3) translate each string into the target language. See the *Management Console Usage Guide* for additional details regarding internationalizing an Ad Hoc instance.

Language translation is *not* automatic. A localization expert must manually translate each text string into the target language. There are three basic tenets for the text translation:

1) The translated text length should approximate the length of the original text.
2) The translated text should convey the same meaning as the original text.
3) The translated text should be consistent in all cases.

The localization process tends to be an iterative undertaking. The localization expert builds and saves the language specific resource files, runs the application with the appropriate browser language, and notes how the application appears to the end user. If adjustments are necessary, the Resource Manager is used to identify the language, navigate to the appropriate resource file, and make the necessary adjustments.

LOCALIZATION

Although not absolutely necessary, the localization expert should have a working knowledge of the application, the resource file hierarchy as described in Table 1, and the relationship of the resource files to the various pages presented in the application.

Resource File Details

Refer to Table 2, below, to identify the correlation between the resource files and their usage within the application.

File Location & Name	General page content	Navigation Path
`ahConfiguration/App_Lo-calResources`		Under the Configuration Button
Appearances	Presentation styles	Report Configuration/Presentation Styles
ApplicationConfiguration	Application settings	Application Configuration/Application Settings
CascadingFilter	Cascading filter settings	Report Configuration/Cascading Filters/Edit or Add
CascadingFilterList	List of cascading filters	Report Configuration/Cascading Filters
Catalog	Catalog information	Data Object Configuration/Catalogs/Edit or Add
CatalogList	List of Catalogs	Data Object Configuration/Catalogs
Configuration	Configuration options	
DataFormats	Data formats	Report Configuration/Data Formats
ObjectInfo	Data object information	Data Object Configuration/Data Objects/Modify
ObjectLinks	Data objet links	Data Object Configuration/Data Objects/Set Links
ObjectList	List of data objects	Data Object Configuration/Data Objects
ObjectParameters	Data object parameters	Data Object Configuration/Data Objects/Set Parameters
ObjectPermissions	Data object permissions	Data Object Configuration/Data Objects/Set Data Object Access Rights
Permission	Permission settings	User Configuration/Permissions/Edit or Add
PermissionList	List of permissions	User Configuration/Permissions
Relationship	Relationship settings	Data Object Configuration/Relationships/Edit or Add
RelationshipList	List of relationships	Data Object Configuration/Relationships
Role	Role settings	User Configuration/Roles/Edit or Add
RoleList	List of roles	User Configuration/Roles

File Location & Name	General page content	Navigation Path
RolePermissions	Role permissions	User Configuration/Roles/Set Data Object Access Rights
SessionParameters	List of session parameters	Application Configuration/Session Parameters or User Configuration/Session Parameters
Settings	Report settings	Report Configuration/Report Settings
User	User settings	User Configuration/Users/Edit or Add
UserGroup	User group settings	User Configuration/Organizations/Modify Organization
UserGroupList	List of user groups	User Configuration/Organizations
UserGroupSessions	User group session parameters	User Configuration/Organizations/Set Session Parameters
UserList	List of users	User Configuration/Users
VirtualView	Virtual view settings	Data Object Configuration/Virtual Views/Modify Data Object
VirtualViewList	List of virtual Views	Data Object Configuration/Virtual Views
`ahControls/App_LocalResources`		
ColPermissions	View-only column permissions	Data Object Configuration/Data Objects/Set Data Object Access Rights/View Column Access Rights
ColPermissions2	Column permissions	Data Object Configuration/Data Objects/Set Data Object Access Rights/Modify Column Access Rights
NamedDateBox	Date dropdown list with pre-defined dates	Column style in Report Wizard
PagingControl	UI paging controls	Shown when paging is on and number of rows exceeds the threshold
PasswordControl	Password dialog box box	User Configuration/Users/Set Password
Search	The list search option	Reports/Find Reports
SpecialValue	Date dropdown with pre-defined dates	Any page requiring pre-defined dates, e.g. Parameters panel in Report Wizard.
`ahReport/App_LocalResources`		
ArchivedReportList	List of archives of a specific report	Report Configuration/Archives/Archives for a report
ArchivedReports	List of archived reports	Report Configuration/Archives
EmailInfo	Email page	Send Report by Email
Folder	Folder definition dialog	Reports/Add a New Folder
ReportCopy	Copy report dialog	Reports/Copy Reports or Reports/Copy Report
ReportListFolderView	List of folders and reports	Reports
ReportMove	Move report dialog	Reports/Move Reports or Reports/Move Report
ReportRename	Rename report dialog	Reports/Rename Report
ReportScheduleList	List of schedules for a report	Reports/Modify Scheduling Information
ReportSubscription	List of users	Reports/Schedule Report/Change Subscription to Report (for a previously scheduled report)

File Location & Name	General page content	Navigation Path
ScheduledReport	Schedule settings	Reports/Schedule Report (for new schedule) or Reports/Schedule Report/Modify Schedule (for existing schedule)
ScheduledReports	List of schedules	Reports/Modify Schedule (for existing schedule)
UserPreferences	Preferences of the current user	Profile/Preferences
UserProfile	Profile of the current user	Profile
`ahWizard/App_LocalResources`		
DashboardWizard	Dashboard create/edit page	Reports/Add a New Dashboard or Reports/Modify Report (for a dashboard)
ReportWizard10	Report create/edit page	Reports/Add a New Report or Reports/Modify Report (for a report)
`App_LocalResources`		
About	About page	*
ApplicationError	Error page	**
Default	Default page	**
Help	***	
`App_GlobalResources`		
Errors		
LogiAdHoc		
Calc		Calculated Columns
ShortHelp		Page Level Help on each Ad Hoc page

Table 2 - Resource File to Usage Cross-Reference

Notes:
* Normally the "Product Name" as defined in Configuration/Application Settings is displayed on the About page. Localized applications should specify the product name in the resource file.

** Usually, these are handled in custom pages, not through the resource file.

*** The Help documentation is too large to be incorporated in the resource files. See "Help/Documentation" below.

Specific Considerations

In addition to the literal string translations in the resource files, the application has other specific localization considerations. Dynamic text strings must be resolved in the resource files. Additionally, there are external constructs that require localization attention.

Dynamic Strings

The resource files for the application are not limited to static text strings. The application also makes use of dynamic text strings. Dynamic text strings include variable information provided by the application during the execution of the application. The technique used to process dynamic text strings is to "tokenize" the variable information and replace the "tokens" with data during execution. The application uses "@Replace" as the token reference in dynamic strings.

For example, the resource file may have an entry that appears as:

<u>Resource Name</u>   <u>Resource Text String</u>

```
ScheduleReportCaption       Schedule for '@Replace1~' Report
```

When this text string appears in the application, the user-defined name of a report will be substituted for the @Replace1~ token. The user would see "Schedule for 'Monthly Sales Revenue' Report" once the token has been resolved for that particular report.

The localization expert should be aware of these tokens, their content, and how to convert them into the target language. The tokens themselves must remain unaltered in the translated strings. In other words, if the localization expert sees @Replace1~, @Replace2~, etc. in the original text string those same tokens must appear in the language specific translation. The location of the token may change within the text string, but the token itself must exist in the original English form.

Refer to
Table 3 for a complete listing of tokenized references. The expected content of the token may be important to the localization expert to convey the proper information to the application user.

File Location & Name	Usage Text	Expected Value
App_GlobalResources/Errors.resx		
Err_BadColumn	The following column cannot be used in this calculation: @Replace1~ . Please choose from the columns list.	@Replace1~=a column name
Err_DataTypeCategory	Data type category of the definition appears to be @Replace1~ and it does not match your selected data type.	@Replace1~=a data type
Err_InvalidQuery	The values you have selected result in an invalid query. The error is: @Replace1~	@Replace1~=a query string

File Location & Name	Usage Text	Expected Value
Err_NumRowsMsg2	Number of rows only accepts integer values between @Replace1~ and @Replace2~.	@Replace1~ = 1 @Replace2~ = an integer number
Err_ObjectDescriptionReplace	@Replace1~ contains special characters not allowed in a column label.	@Replace1~=a column name
`App_GlobalResources/LogiAdHoc.resx`		
AccessRightsCaption	Access Rights for '@Replace1~'	@Replace1~=a data object name
CascadingFilterReplace	Filter Items for '@Replace1~' Cascading Filter	@Replace1~=a cascade filter name
Configuration_ObjectConfig	@Replace1~ gives administrators the ability to manage the following database object configuration features:	@Replace1~=a product name (from Configuration/Application Settings)
Configuration_ReportConfig	@Replace1~ gives administrators the ability to manage the following report configuration features:	@Replace1~=a product name (from Configuration/Application Settings)
Configuration_UserConfig	@Replace1~ gives administrators the ability to create and manage the following user configuration features:	@Replace1~=a product name (from Configuration/Application Settings)
DataObjectLinksCaption	Links for '@Replace1~' Object	@Replace1~=a data object name
InformationForLinkReplace	Information for link to: @Replace1~	@Replace1~=a report name
InformationForLinkReportReplace	Information for link to report: @Replace1~	@Replace1~=a report name
InformationStyleReplace	Information for style: @Replace1~	@Replace1~=a style name
LayerGroupingCols	Layer @Replace1~ Grouping Columns:	@Replace1~=an integer number
NewRelationshipWithObject	New Relationship for '@Replace1~' Object	@Replace1~=a data object name
NextStepTooltip	Click to save your changes and go to the @Replace1~ step.	@Replace1~=a wizard step name
ObjectAccessForRole	'@Replace1~' Column Access Rights for '@Replace2~'	@Replace1~ =a data object name @Replace2~ =a role name
ObjectFixedParameterCaption	Fixed Parameters for '@Replace1~'	@Replace1~=a data object name
ObjectNameReplace	'@Replace1~' Object	@Replace1~=a data object name
PermissionCaption	'@Replace1~' Permission	@Replace1~=a permission name

File Location & Name	Usage Text	Expected Value
PreviousStepTooltip	Click to save your changes and go back to the @Replace1~ step.	@Replace1~=a wizard step name
RelationshipCaption	'@Replace1~' Relation-ship	@Replace1~=a relationship name
RelationshipCaptionWithObject	'@Replace1~' Relation-ship for '@Replace2~' Object	@Replace1~= @Replace2~=
RelationshipListCaption	'@Replace1~' Relation-ships	@Replace1~=a relationship name
RoleAccessRightsCaption	Object Access Rights for '@Replace1~' Role	@Replace1~=a role name
RoleCaption	'@Replace1~' Role	@Replace1~=a role name
RowLimit1	Enter a number between @Replace1~ and @Re-place2~ to limit number of rows or leave the field blank to follow the appli-cation's default limit.	@Replace1~ = 1 @Replace2~ = an integer num-ber
ScheduleReportCaption	Schedule for '@Re-place1~' Report	@Replace1~=a report name
ScheduleReportCaption1	Schedules for '@Re-place1~' Report	@Replace1~=a report name
UserCaption	'@Replace1~' User Pro-file	@Replace1~=a user name
UserGroupCaption	'@Replace1~' User Group	@Replace1~=a user group name
UserGroupSessionCaption	Session Parameters for User Group '@Re-place1~'	@Replace1~=a user group name
VirtualViewCaption	'@Replace1~' Virtual View	@Replace1~=a virtual view name

Table 3 - Tokenized Resource Reference

Style Sheets

The application allows the user to select presentation styles from dropdown lists in various places in the application. The "Styles" list is populated from the names of cascading style sheet files residing in the _StyleSheets folder. These files should be renamed to be language compliant and populate the dropdown lists appropriately.

Application Themes

The application allows the user to select application themes from a dropdown list. The list is populated from the names of subfolders in the App_Themes folder. These folders should be re-named to be language compliant and populate lists appropriately.

Email Notification Messages

The application has two Email templates for confirmation of activity within the application. These templates reside in `ahEmail`. The content of these templates should be translated into the target language, taking care not to remove or redefine any embedded hyperlinks or tokens.

Help/Documentation

The folder containing all of the documentation and help files is `ahHelp`. Files with .htm extension are those that are used for on-line help. Translated versions of these files can reside in the same directory, with the appropriate naming convention. For example ahReportBuilder.htm can be translated to Mexican - Spanish and stored as `ahReportBuilder.es-mx.htm` and stored alongside the parent file ahReportBuilder.htm.

Switching among translated versions of these help files is handled by the application much in the same way as switching between the resources.

CONTACT US

If you would like information about other Logi Analytics products, or require assistance beyond this user manual, please contact Logi Analytics in the following ways:

Corporate Headquarters

Phone: 1-888-LOGIXML (1-888-564-4965)
                  (703) 752-9700

Fax: (703) 995-4811

Email: info@logianalytics.com

Address: 7900 Westpark Drive, Suite A200
                  McLean, VA 22102

web Site: www.logianalytics.com

Sales Department

Phone: 1-888-LOGIXML (1-888-564-4965)
                  (703) 752-9700

Email: sales@logianalytics.com

Customer Support

Phone: 1-888-LOGIXML (1-888-564-4965)
                  (703) 752-9700

Email: http://www.loganalytics.com/support