IFS Aviation Maintenance

Localization Guide

ICAM 26.2



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Introduction

CAMO localization is the process of modifying application files to fit the terminology and language of a specific region.

Note You must have an CAMO license with the Localization Adapter feature enabled before localization changes can be activated.

CAMO localization is not user-based and applies to an entire application server. There is one language setting for all users on a CAMO system.

You can localize CAMO features and locale settings. Locale settings include date, time and currency formats.

For a feature, the following areas can be localized:

- Roles
- Alerts
- UI elements such as labels, buttons, menu groups, menu items, and tab pages
- Error and informational messages

Most CAMO features use property files with the .properties extension. Some newer features of CAMO use JavaScript Object Notation (JSON) files with the .json extension. The localization process depends on the type of file.

The following CAMO features use .json files.

- Phone up deferral
- Deferral reference management (Search, Create, Edit, View)
- Request deferral
- Pending deferral requests
- Station monitoring
- Record oil uptake

Localize with .properties files

All CAMO features, except those that use .json files, are localized using .properties files.

> **Important** You must save a backup of the .properties files before you install a service pack or upgrade because the files are overwritten. If you install an CAMO update patch, your localized .properties files are untouched and a backup is not necessary.

After installing a service pack or upgrade, add your localizations into the new version of the .properties files.

Localize with .json files

> **Important** Because the files are overwritten, you must back up your localized .json files before you install any update patches, service packs, or upgrades.

After installing an update patch, service pack, or upgrade, edit the new version of the .json files and then add your existing localizations by copying and pasting from your backup files.

Encoding

The CAMO database and GUI is encoded with UTF-8, which lets you use any locale supported by this encoding.

Related tasks

Extract the .properties files

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Locale parameters

Regardless of whether or not you are localizing features that use .properties files or .json files, you must configure localization framework settings and locale settings.

Localization framework

Locale and log-detail settings used by the CAMO localization framework are configured using the `i18n.properties` file.

You can find the file at:

```
<Maintenix-install-dir>/apps/assetmanagement/resource/property
```

By editing the `i18n.properties` file in a text editor, you can configure the following settings:

- Locale (for example, `fr_CA`) with the following parameters:
  - COUNTRY, such as `CA` (Canada).
  - LANGUAGE, such as `fr` (French).
- Runtime exception, to display an error and assist in debugging environments. You can configure `i18n_lookup_error` to be True or False.
  - When set to False, CAMO logs the problem in the server log file but without details.
  - When set to True, CAMO throws a runtime exception which results in an unexpected exception error with details in the server log file.

> **Note** In a production environment, this parameter should be set to False to prevent localization errors from affecting the entire application.

Locale settings

Settings for date, time, and numeric formats are stored in the `properties_<locale>.properties` file.

By editing the `properties_<locale>.properties` file in a text editor, you can configure the calendar, time, and numeric settings associated with the locale.

When you install CAMO, the only locale file included is `properties_en_US.properties`. The file is located at: `<Maintenix-install-dir>/apps/assetmanagement/resource/i18n`.

For any other locale, you must create a file. For example, for France you would create a file named `properties_fr_FR.properties` and store it in the same directory.

Note The properties related to date-time formats must be consistent. For example, if `DATE_FORMAT` is `dd-MMM-yyyy`, the DATE_SEPARATOR must be '-'.

Date and time properties

Property	Description	Default setting
`DATETIME_FORMAT`	The format for dates and times together.	dd-MMM-yyyy HH:mm
`DATE_FORMAT`	The format for dates.	dd-MMM-yyyy
`DATE_SEPARATOR`	The character used to separate days and years.	-
`TIME_FORMAT`	The format for time.	HH:mm
`TIME_SEPARATOR`	The character used to separate hours and minutes.	:
`MONTHS`	The short format for months.	Jan, Feb, Mar, Apr, May, Jun, Jul, Aug, Sep, Oct, Nov, Dec
`MONTHS_LONG`	The long format for months.	January, February, March, April, May, June, July August, September, October, November, December
`WEEK_DAYS`	The short format for days of the week.	Su, Mo, Tu, We, Th, Fr, Sa

Property	Description	Default setting
WEEK_DAYS_LONG	The long format for days of the week	Sunday, Monday, Tuesday, Wednesday, Thursday, Friday, Saturday
WEEK_DAYS_SHORT	The alternate short format for days of the week.	Sun, Mon, Tue, Wed, Thu, Fri, Sat
DONE	The word that represents Done.	Done
TODAY	The word that is displayed in the TODAY field at the bottom of a calendar.	Today
EURO_CALENDAR	Determines if the calendar week begins with Sunday or Monday. True: ISO-8601 calendar layout - Monday is the first day of week. False: US layout - Sunday is the first day of week	false
MONEY_FORMAT	The format used when displaying currency values.	###,##0,000.00
DOUBLE_NUMBER	The format used when displaying numbers with up to two decimal places.	#0.##
INTEGER_NUMBER	The format used when displaying integer numbers.	#0

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Properties files

Most CAMO features are localized by modifying .properties files.

For the list of features that use .json files, see *JSON files*.

The .properties files are stored in .jar files in the CAMO application. Before you can edit the .properties files, you must extract them from the .jar files and place them in the `i18n` directory. For more information, see *Extract the .properties files* and *Localize a .properties file*.

Labels, information messages, and error messages

Common CAMO labels and messages are grouped into domains (folders in the file structure).

Each domain has .properties files that contain the label, information message, and error message content for that domain.

To localize, you must extract the .properties files to the `i18n` directory, edit the contents using a text editor and then save the files with the name of the locale to which it applies. For example, if the language is Canadian French, you should save the labels file as `lbl_fr_CA.properties`.

See the following sections for detailed localization instructions:

- *Extract the .properties files*
- *Localize a .properties file*

The domains are:

Name	Location	Files
mxcommonejb	`<Maintenix-install-dir>/apps/assetmanagement/app/assetmanagement.ear`	• alert_en_US.properties • err_en_US.properties • lbl_en_US.properties • msg_en.US.properties

Name	Location	Files
mxcommonutils	`<Maintenix-install-dir>/apps/assetmanagement/app/assetmanagement.ear/lib`	• err.properties • lbl.properties
mxcommonweb	`<Maintenix-install-dir>/apps/assetmanagement/app/assetmanagement.ear/maintenix.war/WEB-INF/lib`	• err_en_US.properties • lbl_en_US.properties • msg_en_US.properties
mxreportweb	`<Maintenix-install-dir>/apps/assetmanagement/app/assetmanagement.ear/maintenix.war/WEB-INF/lib/maintenix.jar`.	• err_en_US.properties • lbl_en_US.properties • msg_en_US.properties

Troubleshoot localization of error messages

Error messages are numbered properties that simplify troubleshooting. The error number can be used to locate the .properties file that contains the error message.

The format is [MXERR-XXXXX] <Message>.

Each CAMO area has its own range of error codes.

Error messages

Range	Sub-range	Description or location
10000-29999		Common framework errors
	10000-14999	mxcommonejb
	15000-19999	mxcommonutils
	20000-24999	mxcommonweb
	25000-27499	mxreportejb
	27500-29999	mxreportweb

Range	Sub-range	Description or location
30000-49999		Middleware business logic errors
50000-70000		UI logic errors

Menu groups, menu items, buttons, to-do lists, and tabs

Localization of many user interface elements (such as menu groups and buttons) are controlled by two entities: data in the CAMO database tables, and a .properties file.

The data controls which entities are used in the system.

The `.properties` file specifies the text that will be displayed.

For example, for to-do lists, the database table `UTL_TODO_LIST` controls which to-do lists are used. The `todolist_en_US.properties` file specifies that United States English text is displayed for the title and content.

The user interface elements listed below can be localized by editing a copy of the appropriate .properties file and then saving the file with the name of the locale to which it applies. For example, if the locale is Canadian English (en-CA), you should save the edited `todolist_en_US.properties` file as `todolist_en_CA.properties`.

The .properties files are found at: `<Maintenix-install-dir>/apps/assetmanagement/app/assetmanagement.ear/maintenix/WEB-INF/lib/maintenix/web`.

User interface elements that can be localized

Element	Database table	Key	Default .properties file (*)
Menu group	`UTL_MENU_GROUP`	`GROUP_NAME`	menugroup_en_US.properties
Menu item	`UTL_MENU_ITEM`	`MENU_NAME`	menuitem_en_US.properties
To-do tab page	`UTL_TODO_TAB`	`TODO_TAB_NAME`	todotab_en_US.properties

Context free button	`UTL_TODO_BUTTON`	`BUTTON_NAME`
		`TOOLTIP(*)`
		`TODO_BUTTON_LDESC(**)`
			todobutton_en_US.properties

To-do list	`UTL_TODO_LIST`	`TITLE_NAME` `CONTEXT_NAME`	todolist_en_US.properties

* A TOOLTIP is the text that shows up when you hover the mouse pointer over a button.

** LDESC is descriptive text that is used when configuring the available buttons for users or roles.

Roles

Roles are collections of menu groups, to-do lists and other common functions that apply to a group of users.

Role names can be localized using the same process as user interface elements.

The ROLE_NAME column in the UTL_ROLE table specifies the text that is displayed in the user interface.

For localizing roles, edit the default role_en_US.properties file in a text editor and save a copy. This file is at the same location as other .properties files: <Maintenix-install-dir>/apps/assetmanagement/app/assetmanagement.ear/maintenix/WEB-INF/lib/maintenix/web.

Extract the .properties files

This section contains steps to extract .properties files so that they can be localized.

About this task

Before localization changes can be activated, you must have an CAMO license with the Localization Adapter feature enabled, as well as an archive utility that supports extraction of .ear, .jar and .war files (such as 7-Zip) installed on your CAMO server.

> **Note** The localization process for .json files is different. For more information, see *JSON files*.

These CAMO folders contain properties files:

- mxcommonejb
- mxcommonutils
- mxcommonweb
- mxreportweb

Steps

1. On your CAMO application server, navigate to the i18n folder.

   The default path for this folder is :

   <Maintenix-install-dir>\apps\assetmanagement\resource\i18n.
2. In the i18n folder, create a new folder for each CAMO folder listed above.
3. On your CAMO application server, navigate to the EAR folder for the domain that you want.

For example, the .properties files containing updated web interface text are stored in the `<Maintenix-install-dir>\apps\assetmanagement\resource\i18n\web` folder.

4. Expand the .ear file using your archive utility.

   The application .jar and .war files are stored in this file.
5. Expand the .war file that contains the properties you want to modify.
6. Navigate to the folder that contains the .properties files.

   For example:

   `<Maintenix-install-dir>\apps\assetmanagement\app\assetmanagement.ear\maintenix.war\WEB-INF\lib\maintenix.jar\web\`
7. Extract the .properties files to the appropriate folder in `<Maintenix-install-dir\apps\assetmanagement\resource\i18n` .

You can now edit the .properties file with your customizations.

Related concepts

Introduction

Localize a .properties file

To implement localization, you must edit and save the .properties files.

Prerequisite

You have extracted the `.properties` file from the application and placed them in the `i18n` directory. For more information, see *Extract the .properties files*.

About this task

> **Note** The localization process for `.json` files is different. For more information, see *JSON files* .

Steps

1. Go to the `i18n` directory.

   The default location is:

   `<Maintenix-install-dir>/apps/assetmanagement/resource/i18n`
2. Using a text editor, open the .properties file that you want to change.
3. Edit the strings as needed.

Note The property entries should match the existing prefixes with the following format: `<folder>.<filename>.<key>="text"`. For example, the property `custom.role.FINANCE` must be placed in the `i18n/custom` folder in a `role_<locale>.properties` file.

4. Save the file with the name of the locale to which it applies.

   For example, for a label file with the locale set to France, save the file as `lbl_fr_FR.properties`.
5. For the changes to take effect, restart the CAMO application server.

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JSON files

Some newer features of CAMO are localized with .json files instead of .properties files. The localization process is different for these features.

The following CAMO features use .json files:

- Phone up deferral
- Deferral reference management (Search, Create, Edit, View)
- Request deferral
- Pending deferral requests
- Station monitoring
- Record oil uptake

For information about localizing other CAMO features, see *Properties files*.

When localizing .json files compared to .properties files, there is only one file per feature area, and the localized file is saved back to its original location, rather than the `i18n` folder.

To localize .json files, you must:

1. Extract the .json files from the application server.
2. Edit the .json files with the localization changes that you want and save the file.

Extract .json files

This section contains steps to extract .json files so that they can be localized.

About this task

Before localization changes can be activated, you must have an CAMO license with the Localization Adapter feature enabled, as well as an archive utility that supports extraction of .ear, .jar and .war files (such as 7-Zip) installed on your CAMO server.

Steps

1. On your CAMO application server, go to to the folder that contains the .json file that you want to extract.

   For example, the `enUS.json` file for Station Monitoring is extracted from `/app/assetmanagement.ear/lmocweb.war/station-monitoring/languages`.
2. Expand the .ear file using your archive utility.

   The application .jar and .war files are stored in this file.
3. Expand the .war file that contains the .json file that you want to modify.
4. Extract the .json file, such as `enUS.json`, to an alternate location.

Localize a .json file

For CAMO features that use .json files, you can localize user interface labels, informational messages, and error messages.

Prerequisite

Before you can localize the content of a .json file, you must extract the file from the CAMO application.

Steps

1. Find the extracted .json file that you want to localize. See *Extract .json files* for information about extraction.
2. Open the .json file in a text editor and modify as you need.
3. Save the changes.
4. Put the modified .json file back in its original location, replacing the original file. For example, if you localized a Station Monitoring file, it would be located at `/app/assetmanagement.ear/lmocweb.war/station-monitoring/languages`.
5. For the changes to take effect, restart the CAMO application server.

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ifs.com

WHERE WE ARE

AMERICAS

+1 888 437 4968

ASIA PACIFIC

+65 63 33 33 00

EUROPE EAST

+48 22 577 45 00

EUROPE CENTRAL

+49 9131 77 340

UK & IRELAND

+44 1494 428 900

FRANCE, BENELUX AND IBERICA

+33 3 89 50 72 72

MIDDLE EAST AND AFRICA

+971 4390 0888

NORDICS

+46 13 460 4000

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