Project and Portfolio Management Center

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Multilingual User Interface Guide

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Chapter 1: Introduction to Multilingual User Interface in PPM Center

Overview of Multilingual User Interface

This document is written for system and instance administrators who are responsible for setting up and maintaining the Project and Portfolio Management Center (PPM Center) instance for their organization. "Managing Entity Translations" on page 39 contains information for end-users.

What is Multilingual User Interface?

The *multilingual user interface,* or MLU, provides support for multiple languages on a single instance of PPM Center. With the MLU, centralized management can roll out and maintain standardized processes and templates for use by resources across many different regions around the globe.

And to support effective portfolio planning, central business planners can cut across language barriers and make sense of information rolled up from activities taking place in different regions. You can set up and maintain the translations of your own enterprise configurations, in addition enabling your employees to interact with PPM Center in their own languages.

In addition to providing standard translations of static interface elements, the MLU approach in PPM Center is designed to facilitate the work of both business configurators and translators. From a business perspective, configurators can continue to define and maintain custom PPM Center entity configurations in their own language without having to worry about setting up duplicate configurations in different languages. With MLU support, a single entity can have multiple translations associated with it.

From the translation perspective, translators can export entity attributes, translate them into multiple languages using their favorite computer-assisted translation tools, and then import the translations back into PPM Center, where that can be associated with the original configuration entity. This means that you need only configure custom entities once, and configure additional translations as needed. For detailed information, see "Managing Entity Translations" on page 39

Viewing and Working with PPM Center in MLU

After you deploy the language packs you need on PPM Center, each user must choose the language to use to interact with the system after logon. This becomes the session language, which remains in effect as long as the user is logged on.

To the extent possible, users see the PPM Center graphical interface (both the PPM Workbench and the standard interface) in the chosen session language. There are two main aspects to consider:

First, translations of all static text that is part of the PPM Center boilerplate interface are provided with each language pack. This includes standard form attributes in all screens, as well as text displayed in peripheral pages, such as:

- Printable HTML views of time sheets, requests, projects
- HPE-supplied JSP reports
- PDF exports such as project overview pages, work plans, PPM Dashboard pages, portlet data, task schedules
- Excel exports (search results, staffing profiles, others)
- Preconfigured email notification messages related to tasks, resource requests, packages, workflows, and time sheets. (Custom notifications are not translated.)

Second, many custom form attributes (such as custom fields on requests) also support multiple translations. For configurations that support MLU, you can add translations for each supported language in your PPM Center system.

From a user's perspective, if a translation for a given custom attribute exists in the user's session language, that attribute is displayed in the user's language. If a translation does not exist, it is displayed in the original language in which the configuration was defined (a process known as "translation fallback"). For a complete list of entities that support MLU, see "Table 5-1. Translatable entity types" on page 40.

Supported Languages

PPM Center supports several languages in addition to English. You can deploy additional languages by selecting them during a fresh PPM Center installation, or during an upgrade to PPM Center version

9.40, or any other time by deploying a language pack. The English language is always deployed during an installation or upgrade.

When you deploy a new language pack on your PPM Center instance, translations in the new language for all boilerplate text attributes in the user interface are automatically loaded into the system. In addition, property fields with default translations for the vanilla PPM Center configuration content provided by HPE are copied to the server file system and can be selectively imported into PPM Center using the standard translation management tools (see "Managing Entity Translations" on page 39). Depending on your level of usage and customization of the vanilla configurations, you may decide to import some of the default translations, or you may discard them if they are not relevant to your installation. Once the new language is deployed, you can then add your own translations in that language for your custom configurations.

> **Note:** For information about the specific languages supported, see the *Release Notes*.

Translated Content and Translation-Management Tools

HPE provides translations for all static text attributes in the boilerplate user interface in all supported languages. However, to enable complete multilingual support for your PPM Center users, you must manage your own translations for the custom entities and master data that you configure based on the unique requirements of your business.

HPE provides a set of flexible command-line tools that you can use to export your custom attributes, and after you have them translated, import the translated attributes back into PPM Center. You can run these tools directly on the server, or via object-type commands in Deployment Management (or other automation solution).

The scope of the content you translate, and how often you have it translated, is up to you. For example, you could implement a periodic system-wide process to update all translations in the system on a regular basis. Alternatively, you could have specific attributes translated on an entity-by-entity basis, along with each configuration change, as needed.

The translation management toolset gives you the following functionality:

- Export attributes: Export your custom attributes (at specified level of granularity) in their definition language into standard "property" file format for use with standard computer-assisted translation software.

- Import translations: Import translations of you custom attributes from standard "property" file format into PPM Center.
- Generate translation reports to assess the state of the translations in your PPM Center system, and to assess the impact of importing new translations.

Translation management topics are addressed in "Managing Entity Translations" on page 39 and "Using Translation Management Tools" on page 56.

Caution: Because of the range of entities for which translation maintenance may be required, you must use these tools to manage the translations via export, import and reporting. No controls for updating translations are provided in the standard interface.

Note: If your organization requires a language that is not currently supported in PPM Center, consider contacting HPE or your services partner for a custom language pack. A partner can obtain the HPE PPM Open Localization Toolkit to create custom language packs to deploy to PPM Center.

As with other partner customizations, the translations in custom language packs are supported by the provider of the language pack. HPE Support may require a PPM Center problem to be reproduced in an HPE language pack (such as English) for investigation if a language pack issue is suspected.

Partners seeking information about how to obtain the HPE PPM Open Localization Toolkit and documentation on the product can go to https://lnast01pmp.saas.hpe.com/product/project-and-portfolio-management/resources/file-repository.

MLU Scenarios

The following scenarios illustrate how the features of the MLU might be used in PPM Center.

Scenario 1: Common Demand Management Process Used Independently in Different Regions

Consider a standardized demand management process that is used in multiple regions, but each "run" of the process involves only a single region. For example, in Korea, requests are submitted and

processed entirely in Korean. In the United Kingdom, the same request process is used, but requests are submitted and processed entirely in English.

This scenario applies best to project and program issues, risks, and scope changes. A project defined in Japanese would have all of its associated issues, risks, and scope change requests in Japanese. A project defined in German would have the associated requests in German. This scenario is common in large corporations in which IT processes are defined centrally and regional subsidiaries simply use the processes.

Scenario 2: Demand Management Processes Defined for and Used in a Single Region

Laws that regulate importation of pharmaceuticals in different countries require that a corporation define several unique, region-specific processes for transactions of this type. In this case, the company does not require multiple translations of the PPM Center entities involved. They just need the ability to define the necessary entities in different languages on their single PPM Center instance.

Anything that is subject to local laws in different regions benefit from the ability to handle processes and transactions in multiple languages.

Examples

- A subsidiary of a large enterprise must follow strict guidelines in outsourcing projects to off-shore workers.
- A Swedish bank plans to purchase commercial buildings in three different countries, each of which has its own regulations on foreign purchase of real estate. They need separate processes for property purchases in all three cities.

Key Concepts

To understand how to set up, manage, and work with the MLU in PPM Center, it is important that you become familiar with the following terms:

- **Boilerplate text.** Text that HPE provides and that is built into the PPM Center user interface (both the standard interface and the PPM Workbench), and is not configurable by PPM Center users. Boilerplate text is distinct from custom configurations such as the prompts for fields on a request type. Much of the text that a PPM Center user sees in a form is a combination of boilerplate text and

configured text.

- **Configuration.** In this document, *configuration* refers to entities such as request types, workflows, report types, portlet definitions, user data, and so on that define custom forms and processes. HPE provides basic versions of some of these entities in the Best Practices content, but a PPM Center administrator can also customize or create them. Configuration entities typically contain complex business rules, and have migrators associated with them so that you can manage configuration changes using a standardized configuration-management process.
- **Definition language.** Language in which a PPM Center entity is defined. To maintain the highest translation fidelity, HPE recommends that all translations of custom configuration attributes and master data lists (such as Time Management activities or Portfolio Management scoring criteria) be based on their definition language (rather than on subsequent translations).

  To maintain the integrity of the original business definition of your configuration, PPM Center configurators are restricted from modifying a configuration entity in any language other than the language in which it was defined. This enforces a clear separation between modifying the business rules of your configuration and translating that configuration.

  Note that, in some cases you may find it necessary to change the definition language of a given configuration, for example, if you needed to transfer ownership of the configuration to a group in another region. PPM Center does provide a mechanism for changing an entity's definition language.
- **Entity attributes.** These are the translatable properties of an entity.
- **Entity ID.** A number that identifies a type of entity in PPM Center, such as "request type." For example, all request types (Bug, Enhancement, Proposal, and so on) in the system share the same entity ID.
- **Fallback.** This is the term for the technical mechanism by which an attribute is displayed to the user in its definition language if a translation in that user's session language does not exist.
- **Formatting locale.** A user's locale setting (on the **Regional Settings** tab of the Edit My Profile page) used by PPM Center to determine how to format dates, numbers, and currency values for display to that user. The formatting locale is distinct from the user's choice of session language (which is selected from the limited set of languages supported in your PPM Center instance), though often they logically coincide. But PPM Center supports any locale for formatting purposes, even if the primary language used in that locale is not supported. For example, a user in Norway will want to see dates and numbers formatted according to Norwegian convention even though the Norwegian language is not supported in PPM Center.

  > **Note:** (Windows) To export data to Microsoft Excel export or synchronize data with Microsoft Project, the user's PPM Center locale preference must match that of the Windows

> environment on which they are performing the data export or synchronization. This match ensures that Excel or Microsoft Project can interpret dates and numbers correctly.

- **Master data.** Non-transactional data that is configured to support your PPM Center transactional processes. Much of the master data defined in PPM Center is global in nature and thus needs to be translated into multiple languages so that it can be used and comprehended by users who work with PPM Center in different languages. Master data that supports MLU can be translated via the same mechanisms as MLU-enabled configurations: export the attributes into property files, translate them as desired, and import the translated property files back into PPM Center.

  Master data include values for validations, activities, charge codes, scoring criteria, roles, skills, and so on. Except for validations, these do not have complex rules associated with them and are managed directly in the production PPM Center instance.

- **Reference code.** The primary means that PPM Center uses to identify many (but not all) configuration entities. A reference code is not a translatable attribute, and typically does not change once it is set; you can use the reference code to refer to an entity by its reference code, regardless of whether its name is changed or translated. Most configuration entities that support the MLU have a reference code attribute.

- **Session language.** This is the language a user selects when logging on to PPM Center. (The language set for the browser is the default session language selection.) The languages available for selection depend on which language packs are deployed and enabled on the PPM Server.

  The session language determines which translations of text the user sees in the PPM Center user interface. This is distinct from the formatting locale preference that the user specifies (on the **Regional Settings** tab of the Edit My Profile page), which determines how dates, numbers, and currency values are formatted for display to the user.

- **System language.** This is the default language for the PPM Center installation and the language in which server administration is conducted. The system language is the language used to generate system-level information such as server logs, as well as system data that do not support multiple translations (such as HPE-provided reference object type names).

- **Transactional entities.** These are particular instances of the forms completed for transactions such as requests, time sheets, projects and programs. These entities hold the data captured in the forms that move through the respective IT business processes.

  PPM Center currently has no facility for providing multiple translations for transactional data. Note, however, that predefined values for drop-down list fields are displayed in each user's respective session language (assuming translations exist in the system). In some cases you may prefer to divide activities that occur in different languages. For example, if a mix of languages in a single request would cause confusion, you could use separate request types for different languages.

- **Translatable resource.** Any entity attribute that support multiple translations in PPM Center, such as custom field prompts for requests and user data, custom drop-down list validation values, roles, and skills. Translatable resources are addressed in detail in "Managing Entity Translations" on page 39 and in "Using Translation Management Tools" on page 56.

What's in this Document and Related Information

What's in this Document

The remaining sections in this guide provide the information you need to set up the MLU on your PPM Center instance, including how to:

- Select the system language for the PPM Center instance during installation or upgrade
- Install some or all of the languages you want to support in PPM Center during installation or upgrade
- Deploy languages any time using the kDeploy.sh script
- Enable and disable languages deployed on your PPM Center instance
- Import translations of boilerplate content
- Manage translation of your custom configurations

Related Information

This document is intended to be used with the following documents, which provide detailed information on PPM Center system requirements, installation, upgrade, and PPM Center product configuration:

- *Release Notes*
- *What's New and What's Changed*
- *System Requirements and Compatibility Matrix*
- *Installation and Administration Guide.*

- *Upgrade Guide*
- *Portfolio Management Configuration Guide*
- *Project Management Configuration Guide*
- *Time Management Configuration Guide*
- *Resource Management User's Guide*
- *Demand Management Configuration Guide*
- *Open Interface Guide and Reference*
- *Commands, Tokens, and Validations Guide and Reference*
- *Customizing the Standard Interface*
- *Creating Portlets and Modules*

Chapter 2: MLU Features and Display Settings

Logging On in Your Session Language

After the multilingual user interface on your PPM Center instance, users can select their session language from the **Language** list on the logon page. The default session language displayed in the **Language** field at logon is the locale setting configured for the Web browser. If PPM Center does not support the preferred language set for the browser, the system language becomes the default session language. To use a language other than the default to interact with PPM Center, users must select it when they log on to PPM Center.

> **Note:** For more information about the session language, see "Introduction to Multilingual User Interface in PPM Center" on page 6. For more information on how to log on to PPM Center, see the *Getting Started* guide.

The languages available in the **Language** list depend on the language packs deployed on the system. Language packs replace the English language text in the user interface with text in a different language. For more information about language packs, see the *Installation and Administration Guide*.

For the session language that a user selects, the system tries to display all text attributes in the user interface in the selected language. This includes all static boilerplate text in the interface, as well as custom attributes. However, translations may not exist in the selected language for all custom attributes. Attributes that are not translated are displayed in the language in which they were defined.

If a user cannot work with a form in PPM Center, it is likely that the underlying configurations have not yet been translated into the user's session language. For example, if activities have been translated to your language, the names and descriptions of activities are displayed in the user interface in your session language.

> **Note:** When you create a new configuration, its definition language is implicitly set to your session language. For more information about session and definition languages, see "Introduction to Multilingual User Interface in PPM Center" on page 6.

(Demand Management Only) Custom Auto-Complete Fields and List Fields in MLU

Custom drop-down fields and custom auto-complete fields validated by "List" and "SQL - Custom" behave the same in the MLU, as follows:

If a custom drop-down/auto-complete list has multiple values, then a drop-down/auto-complete field with an existing value is shown in your current session language, even if your session language is different than the language in which the value was originally selected from the drop-down/auto-complete list.

Example. A custom drop-down/auto-complete list with multiple values has been created for requests. A user who logs on to PPM in a German language session creates a request, and in doing so, selects a value for the custom drop-down/auto-complete list. A different user logs on to PPM Center in a Korean language session and opens the new request, which was defined in German. The value in the drop-down/auto-complete field is shown in Korean.

> **Note:** PPM does not support auto-complete fields validated by "SQL - User" in the MLU.
>
> For more information, see "Translating Auto-Completes and Drop-Down Lists for Requests" on page 45.

To ensure that a SQL drop-down/auto-complete field behaves correctly,

1. In the PPM Workbench, open the request type which contains the drop-down/auto-complete field.
2. On the **Fields** tab, select the drop-down/auto-complete field and click **Edit**.

   The Field: <*Field Name*> window opens to the **Attributes** tab.

   > **Note:** If the drop-down/auto-complete field is a column of a table component, select and edit the table component.

3. In the Search Validation field, specify a list validation which contains:
   - All the values potentially returned by the drop-down/auto-complete field.
   - Potential translations of the returned values. If translations are not provided, the returned values will be used.

   > **Note:** If a table component contains several SQL drop-down/auto-complete columns, the list

> validation should include values potentially returned by all the components together with translations of the returned values.

4. Click **OK**.

Display of Column Headers in Narrow Time Management Portlets

The column headers for Time Management portlets can be misaligned and displayed vertically when displayed in Asian languages such as Japanese. If this occurs, it is typically in "narrow" portlets.

If you are a PPM Center administrator, you can configure the column widths on a editable portlet definitions as follows:

1. Copying the seeded portlet definition that displays the misaligned column header text.
2. Adjusting the column width on the copied portlet definition.
3. Publish the new portlet definition for end users.

For information about how to copy a portlet definition, adjust portlet column width, and how to publish a portlet definition, see the document *Creating Portlets and Modules.*

Features and Display Settings

Regional Settings

Regional settings allow you to set formatting options that affect how dates, numbers, and currency values are displayed in PPM Center. MLU and language packs do not affect these formatting options. For more information about how to specify regional settings, see the *Getting Started* guide.

Currency Display in MLU

PPM Center can display cost data for entities such as projects and financial summaries in different currencies, depending on the region associated with each entity. A given entity can only be associated with one region at a time. All cost data associated with that entity is managed in the local currency of the entity's region. (In addition, all costs are also converted to the system base currency. Costs associated with an entity can typically be displayed either in the local currency of the entity's region, or in the system base currency.) For more information, see *Financial Management User's Guide.*

It is important to note that a user's regional settings do not determine which currency is displayed for that user. As noted above, currencies are always displayed in the respective local currency of the region associated with the entity that contains the cost data (or in the system base currency). However, the user's regional settings do determine how that currency value is *formatted* for display. That is, the regional settings determine whether the currency symbol is displayed on the right or left of the number, whether the number value itself includes a comma or a period as the decimal separator, and so on.

Notifications in MLU

Notifications are email messages sent to alert team members when specific events occur. Four applications in PPM Center support notifications. However, only one application, Demand Management, supports notification translation using MLU (see "Table 2-1. Notification Translation" below).

Table 2-1. Notification Translation

Application	Entities with Notifications	How Notifications are Translated
Demand Management	Request types, workflows	Managed translation (MLU)
Project Management	Tasks	Language pack (Because these are standard, non-configurable messages, standard translations are included for them with language pack deployment.)
Resource Management	Resource pools, staffing profiles	Language pack (Because these are standard, non-configurable

Table 2-1. Notification Translation, continued

Application	Entities with Notifications	How Notifications are Translated
		messages, standard translations are included for them with language pack deployment.)
Time Management	Time sheet policies	Create a separate policy per region

Demand Management notifications are sent to recipients in the system language of the PPM instance (as selected for the PPM installation). The formatting of dates and numbers displayed in notification messages is based on each recipient's formatting locale (as specified on the **Regional Settings** tab of the Edit My Profile page). For more information about translating entities such as Demand Management notifications see "Managing Entity Translations" on page 39

Formats for Dates, Numbers, and Currency Values in Email Notifications

Dates, numbers, and currency values in email notifications are formatted based on the recipient's regional settings. Note that, if a user uses a date field from a request in a notification, the value is always displayed the "long" format, even if the configuration specifies the medium or short format for the field.

Exporting Translated PPM Content to PDF

You can export PPM content that uses multiple languages to PDF. This includes translated PPM Dashboard page content, project overview pages, work plans, portlet data, and task schedules.

For information about how to export portlet content and Dashboard pages in PDF files, see the Getting Started document. For information about how to export project overview pages, task schedules, and work plans to PDF, see the *Project Management User's Guide*.

Exporting to Microsoft Excel and Microsoft Project

To ensure that number and date formatting corresponds to third-party software used with PPM (such as Microsoft Excel or Microsoft Project), you must specify the same regional settings (locale) on both your client system (PC) and your PPM account. For information about how to specify regional settings for your system, see the documentation for your operating system. For instructions on how to specify regional settings for your PPM account, see the *Getting Started.*

Language Support for Web Service Operations

The system language on your PPM Center instance is used for the web service operations that write data into PPM Center (create and update services). To work with the data in the languages supported (and enabled) on PPM Center, specify the session language in the SOAP header.

PPM Center does not support working with the data in multiple languages in a single web service call. Multiple, separate web service transactions are required, and you must specify the session language for each.

Web service special commands also rely on the selected session language. To work with the data in a different language, you must change your session language.

For information about the Web services available for you to use in your PPM Center deployment, see the *Web Services Guide.*

Chapter 3: Implementing Multilingual User Interface in PPM Center

Overview of Multilingual User Interface Setup

Setting up the multilingual user interface in PPM Center involves the following high-level tasks:

1. Confirm that your database language semantics settings are correct. For information, see the *Installation and Administration Guide.*
2. Deploy the language packs for the languages that you want supported in the PPM Center system.
3. Make sure that you have the following access grants:
   - System: Submit Reports access grant. This is required to run the Translation Details and Translation Summary reports.
   - Sys Admin: Manage Translations access grant. This is required to use the translation scripts (`kExportAttributes`.sh and `kImportAttributes.sh`).

   > **Note:** You have these access grants by default if you belong to either the PPM Administrator or the PPM All Access Grants security group.
4. Assess how importing HPE-provided content translations will affect your PPM Center system.

   Each language pack provides default translations for the generic configurations provided with each PPM Center installation. If you are working with a new installation of PPM Center, HPE recommends that you import all default translations before you start working on the system configurations for your business. However, if you are working with an upgraded PPM Center system, your enterprise has likely made significant configuration changes to the original generic content. In this case, the default translations provided for these configurations may not be fully relevant.
5. (Optional) Based on the results of your impact assessment (Step 4), import the portions you want of the HPE-provided PPM Center content translations for all deployed languages.
6. If you use Best Practices, assess and import the portions that you want of the default translations for the Best Practices content.

> **Note:** If you are working with a new installation of PPM Center, HPE recommends that you simply import all default translations before you begin to work on the system configurations for your business. However, if you are working with an upgraded PPM Center system, your enterprise has likely made significant configuration changes to the original Best Practices content. In this case, the default translations provided for these configurations may not be fully relevant.

7. Perform configuration tasks as necessary, on an ongoing basis, after the installation or upgrade.
8. Going forward, as configurations are modified to support changing business needs, managing the added dimension of multiple languages becomes important. To address this, develop and implement a strategy for managing translations of the master data and translatable configuration entities for your organization.

This section provides guidance for performing these tasks.

Language Deployment

Language Deployment in PPM Center

As an administrator, you can add languages to a PPM Center instance during initial product installation, during a product upgrade, or on an as-needed basis after the product is installed. The following sections describe how to deploy languages on your system.

> **Note:** Regardless of the system language and additional languages deployed, English is automatically deployed on a PPM Center instance.

Language Deployment During Installation

The *Installation and Administration Guide* provides the complete instructions on how to install PPM Center. This section focuses only on the installation steps that are specific to the MLU.

> **Caution:** Before you deploy languages during an installation, make sure that you have correctly set the NLS_LENGTH_SEMANTICS parameter, as described in the *Installation and Administration Guide.*

To deploy languages during PPM Center installation:

1. Follow the instructions provided in the *Installation and Administration Guide* to start the installer wizard.
2. After you start the PPM Center installation, the installer wizard prompts you to select the language that you want it to use.

   > **Note:** The language you select here is only used by the installer wizard. It is not the system language, which you select later in the installation process.
   >
   > Also, regardless of the installation language you select, server configuration parameters are displayed in English on the configuration step pages of the install wizard.

   The installer displays its steps in the language you selected as it guides you through the installation process.

   On the MLU step of the wizard, you can select the system language for the PPM Center installation and any additional languages you want to deploy on the instance.
3. From the **Select the system language** list, leave the default (English), or select a different language.
4. Select the checkboxes that correspond to all of the languages you want to deploy in addition to the system language.

   > **Note:** If you do not select additional languages to deploy during installation, you can add them later by downloading the language packs that you need, and then running the `kDeploy.sh` script. For instructions, see "Deploying Languages Using kDeploy.sh and Server Clustering" on page 29.
5. Complete the installation as instructed in the *Installation and Administration Guide.*

   > **Tip:** If the deployment fails on IBM AIX by prompting an error message that contains any of the following entries:
   >
   > - `INIT: Paging space is low`
   > - `ksh: cannot fork no swap space`
   > - `Not enough memory`
   > - `Fork function failed`
   > - `fork () system call failed`
   > - `Unable to fork, too many processes`

- `Fork failure - not enough memory available`
- `Fork function not allowed. Not enough memory available.`
- `Cannot fork: Not enough space`
- `SIGKILL(process killed)`

Make sure that there is enough paging space available on IBM AIX (wait until the system releases more paging space or extends current paging space size) and deploy again.

6. Complete any tasks you need to perform after language deployment. For descriptions of these tasks, and instructions on how to perform them, see "After Language Deployment" on page 31.
7. To import the default translations for the basic configurations that HPE provides in your new PPM Center installation, run the following command for each language deployed on your PPM Center instance:

   ```
   sh. /kImportAttributes.sh -username admin -password admin -directory <PPM_Home>/mlu/HPContentTranslations/<LP>
   ```

   where *<LP>* represents the code for a supported language.

   Tip: To make this process easier, you may do the follows:

   a. Copy the content (zip archives) from each Language Pack to the *<PPM_Home>*`/mlu/translations` folder.

   b. Run the following command:

   ```
   sh ./kImportAttributes.sh -username admin -password admin
   ```

   This command automatically imports all files from translations folder to PPM Server.

   Note: To use the kImportAttributes.sh script, you must have the Sys Admin: Manage Translations access grant.

8. After you set up your fiscal time periods for PPM Center, you must add translations for the fiscal time period names in all supported languages. For details, see "Translating Fiscal Month Names" on page 32. For information about how to install fiscal time periods, see the document *Generating Fiscal Periods*.
9. Deploy the default translations for Best Practices. For instructions, see "Setting Up Multilingual Support for Best Practices" on page 34.
10. After your PPM Center system is in place, manage the translations for the custom configurations that you create for your organization. For instructions, see "Managing Entity Translations" on page

39 and "Using Translation Management Tools" on page 56.

Language Deployment During a PPM Center Upgrade

During an upgrade to PPM Center version 9.40, you must specify the system language for your instance. You can also select additional languages to deploy in the system, although this is optional.

Before you begin the upgrade, read the following part "Issues to Consider Before You Upgrade" below.

Issues to Consider Before You Upgrade

This section addresses how upgrading to PPM Center version 9.40 affects the data in your current instance.

- The only direct upgrade path supported is from version 7.5 to 8.00. If you are upgrading from versions earlier than 7.5, you must first upgrade to 7.5, and then upgrade to 8.00. For information about how to upgrade to PPM Center version 7.5, see the version 7.5 *Upgrade Guide.*
- If you upgrade to version 7.5, and you then install one or more language packs, the content for translatable columns in the LOOKUPS table is overwritten. If you have customized this content on a version 7.1 instance, these changes are lost.
- If you are upgrading from PPM Center version 7.1, and you plan to deploy additional non-English languages on your instance, HPE recommends that you not deploy language packs after you upgrade to version 7.5. Instead, continue the upgrade process and deploy new languages only during the upgrade to PPM Center version 8.00.

  > **Note:** There is a known issue related to deploying a language pack in PPM Center version 7.5. If you install the language pack on an instance upgraded to version 7.5, default translations are automatically applied for drop-down list items that are part of the generic set of PPM Center configurations. If you have customized any of these items, your changes are lost. However, this issue does not apply to language pack deployment in PPM Center version 8.00.

  You must consider the following issues before you upgrade:

  - "Determining What Translated Content to Import After Deploying Languages" on the next page
  - "Time Period Customizations" on the next page
  - "System Language Selection" on page 27

Determining What Translated Content to Import After Deploying Languages

When you deploy a language pack during the upgrade to PPM Center version 8.00, the following occur automatically:

- The new language becomes available as a session language that user a PPM Center user can select from the **Language** list at logon.
- All boilerplate text translations are deployed into the PPM Center system.

  Boilerplate text is the text that hard-coded in the PPM Center user interface (both the standard interface and the PPM Workbench), and is not configurable by PPM Center users. (This does not include custom attributes that you have configured for your business in PPM Center, such as the prompts for custom request fields.)
- Text `.properties` files that contain the default translations for basic PPM Center configurations (such as Bug and Enhancement request types and workflows, Best Practices request types and workflows, and so on) are placed on the PPM Server filesystem.

  The translations contained in these property files are not automatically installed into PPM Center; rather, you must assess whether you want to import all, some, or none of these default translations, depending on which of the generic configurations your organization uses, and how much of the default configuration has been customized.

  > **Note:** For information about the text `.properties` files, see "Using Translation Management Tools" on page 56.

If you want to make the translations that HPE provides for the default configurations available, you must run the `kImportAttributes.sh` script after you upgrade. However, before you import these translations, it is important that you determine whether your current configurations have been tailored to your specific business processes. If they have, then the translated content for the upgraded default configurations may not apply in your environment.

HPE strongly recommends that, after you upgrade to PPM Center version 9.40, you run the `kImportAttributes.sh` script in *test mode* to generate the Translation Impact report. The details of this report indicate how importing the translations will affect your PPM Center environment. You can then decide which of the default translations you want to import, and which to exclude.

For information on how to run the `kImportAttributes.sh` script in test mode, see "Running Import Script" on page 66. For information on the Translation Impact report, see "Translation Impact Report" on page 65. For information on how to selectively import translated content, see "Using Translation Management Tools" on page 56.

Time Period Customizations

Any flexible time period customizations that were created on your current PPM Center instance are removed from the database schemas during upgrade. Existing resource-planning data remains, but is grouped according to *fiscal* time periods rather than *flexible* time periods, which no longer exist as entities in PPM Center version 8.00. For detailed information about changes to time periods introduced in PPM Center version 8.00, see the *Upgrade Guide.*

System Language Selection

If the system language on your pre-upgrade (version 7.5) PPM Center instance is English, then when you upgrade to PPM Center version 9.40, you have the option of changing the system language. If the system language on your pre-upgrade (version 7.5) PPM Center instance is *not* English, then the system language does not change during upgrade.

> **Note:** Keep in mind that, if you change to a non-English system language, all seeded data and all custom data are set to the new non-English system language.

Selecting Languages During PPM Center Upgrade

The Upgrade Guide provides the detailed instructions on how to prepare to upgrade your PPM Center instance and how to perform the upgrade, including the steps for deploying languages. The following procedure focuses only on the upgrade steps that are specific to the MLU.

> **Caution:** Before you deploy languages during an upgrade, make sure that you have correctly set the `NLS_LENGTH_SEMANTICS` parameter, as described in the Installation and Administration Guide.

a. Follow the instructions provided in the *Upgrade Guide* to start the upgrade wizard.

   The upgrade wizard prompts you to select the language you want it to use.

b. From the list, select the language for the wizard to display as it guides you through the upgrade process.

   Later in the upgrade, you have the option of selecting a system language other than English.

c. The wizard asks whether you want to run the prevalidation step. To perform prevalidation, leave **Yes, I would like to run prevalidation step now** selected, and click **Next.** To skip prevalidation, select **No, I would like to skip the prevalidation step,** and then click **Next.**

   > **Note:** HPE strongly recommends that you perform this step as part of the upgrade. Prevalidation checks for data inconsistencies that might cause upgrade problems. For more details, see the *Upgrade Guide.*

d. If you run prevalidation:

i. Review the `PreValidationResultsIndex.html` file, which is located in the `<PPM_Home>/upgrade_910/logs/reports/html/integrity/validator` directory.

The report lists all issues that you must resolve before you can successfully upgrade to PPM Center9.40.

ii. If prevalidation revealed problems, cancel the upgrade, resolve the problems, and then begin the upgrade again.

> **Note:** If you need assistance with database issues, consult your database administrator.

iii. If prevalidation uncovered no problems, click **Next.**

e. When prompted, select the system language.

f. Click **Next.**

On the next step, you can select languages to deploy on the upgraded PPM Center instance.

g. Select the checkboxes for the languages to deploy, and then click **Next.**

> **Note:** If you do not select additional languages during the upgrade, you can deploy them later by running the `kDeploy.sh` script. For instructions, see "Deploying Languages Using kDeploy.sh and Server Clustering" on the next page.

h. Complete the upgrade procedure as instructed in the *Upgrade Guide.*

i. Complete any tasks you want to perform after language deployment. For descriptions of these tasks, and instructions on how to perform them, see "After Language Deployment" on page 31

j. (Optional, but strongly recommended) For each language deployed on your PPM Center instance, run the `kImportAttributes.sh` script in test mode, and then, based on the results in the Translation Impact report, decide which of the default translations to import and which to exclude.

> **Note:** To use the `kImportAttributes.sh` script, you must have the Sys Admin: Manage Translations access grant. For instructions on how to run the script in test mode, see "Running Import Script" on page 66
>
> For information on the Translation Impact report, see Translation Impact Report.

k. For each language deployed on your PPM Center instance, run the kImportAttributes.sh script to import the translated user interface content.

> **Note:** For instructions on how to selectively import translated content, see "Using

> Translation Management Tools" on page 56.

l. After you import the HPE-provided translations, not all content is available in the deployed languages. You must manage the translation of custom entities and data manually.

   For information on identifying and translating translatable resources in PPM Center, see "Managing Entity Translations" on page 39 and in "Using Translation Management Tools" on page 56.

Deploying Languages Using kDeploy.sh and Server Clustering

Deploying Languages Using kDeploy.sh

You can deploy a language at any time after PPM Center center installation by running the `kDeploy.sh` script. The procedures described in this section show how to run the script to deploy a language in addition to the system language, and how to run the script to deploy a language as the new system language.

To deploy a language pack using the `kDeploy.sh` script after PPM Center is installed or upgraded:

1. Using either console mode (UNIX) or Cygwin (Windows), navigate to the `<`*PPM_Home*`>/bin` directory, and run the following:

   ```
   sh ./kDeploy.sh -lang <LP>
   ```

   where `<`*LP*`>` represents the language codes for a supported language.

2. Follow the remaining script instructions.
3. For each additional language you want to deploy, repeat Step 1 and Step 2.
4. Restart all PPM Center components on the machine.
5. (Optional, but strongly recommended) For each language deployed on your PPM Center instance, run the `kImportAttributes.sh` script in test mode, and then, based on the results in the Translation Impact report, decide which of the default translations to import and which to exclude.

   > **Note:** For information on why you might choose to perform this optional step, see

> "Determining What Translated Content to Import After Deploying Languages" on page 26.
>
> For instructions on how to run the `kImportAttributes.sh` script in test mode, see "Running Import Script" on page 66. (You must have the Sys Admin: Manage Translations access grant.)
>
> For information on the Translation Impact report, see "Translation Impact Report" on page 65.

6. For each language deployed on your PPM Center instance, run the kImportAttributes.sh script to import the translated user interface content.

   > **Note:** For instructions on how to selectively import translated content, see "Using Translation Management Tools" on page 56.

7. Complete the tasks described in "After Language Deployment" on page 31.

Server Clustering

The upgrade utility checks the `server.conf` file for the existing PPM Center setup to determine whether you have a single PPM Server or multiple servers in a cluster. Based on this, the upgrade tool sets up either a stand-alone or clustered environment for JBoss.

For detailed information on server cluster configuration, see the *Installation and Administration Guide.*

Chapter 4: After Language Deployment

What to Do After Language Deployment

This section addresses the tasks that you can perform after you have deployed languages in your PPM Center instance. It provides information about how to manage translation of your custom configurations, install unicode fonts for exporting data to PDF files, enable or disable the languages in your system, configure linguistic sorting, and set up multilingual support for Best Practices. The section also includes topics that describe how to translate fiscal periods, and translate descriptions and reasons in time sheet Suggested Items lists.

Managing Translation of Custom Configurations After Language Deployment

After you deploy a language in PPM Center, not all content is translated into that language. Although boilerplate content is translated, you must manage the translation of custom configurations manually. For detailed information about how to work with translatable resources in PPM Center, see "Managing Entity Translations" on page 39 and in "Using Translation Management Tools" on page 56.

Linguistic Sorting

PPM Center uses Oracle's linguistic sorting functionality. In addition to binary sorts, PPM Center supports both of the linguistic sort types that Oracle performs. These are:

- Monolingual linguistic sorts. These are typically used for European languages.
- Monolingual linguistic sorts. These are typically used for European languages.

> **Note:** For detailed information on linguistic sorting, see the *Oracle Database Globalization Support Guide* for the Oracle version you have installed.

Configuring Linguistic Sorting

You can edit the `mlu.conf` file to change the default sort setting (nlsSort variable) for each language deployed on the system.

To configure linguistic sorting:

1. In a text editor, open the `mlu.conf` files in the following two directories:

   ```
   <PPM_Home>/conf/
   <PPM_Home>/server/<PPM Server_Node_Name>/deploy/itg.war/
   html/client/
   ```

2. To change the sort setting for a language, replace the displayed value with any Oracle-supported linguistic sort value.

   > **Note:** For information on valid values for named linguistic sorts, see the OracleDatabase Globalization Support Guide for the Oracle version you have installed.

   Example

   ```
   US.nlsSort=GENERIC_M
   DE.nlsSort=GERMAN
   KO.nlsSort=KOREAN_M
   ```

3. After you finish configuring the nlsSort variables in both `mlu.conf` files, save the files.
4. If your PPM Center instance includes multiple nodes in a cluster configuration, you must complete Step 1 through Step 3 for every node participating in the cluster.
5. Restart the PPM Server or servers.

Translating Fiscal Month Names

Fiscal periods appear in or are used for the following:

- Total costs, benefits, and approved budgets for fiscal quarters and fiscal years in financial summaries in Financial Management
- Scenario comparisons in Portfolio Management

- Staffing profiles in Resource Management
- Calendar auto-complete fields used in creating projects, for example
- Portlets and reports

You can create sets of translated fiscal month names for all or any subset of the languages installed in PPM Center, but the process is different than for translation of boilerplate or custom content. You must separately add your own translations for fiscal month names after you install or upgrade PPM Center.

As described in the document *Generating Fiscal Periods,* you configure previously translated month names in `periods_<language>.conf` files, one file for each installed language for which you want to establish translated month names. (In these files, you can also configure the formats of any type of period—year, quarter, month, and week—differently for each language, as needed.) For example, the language configuration file for German is named `periods_de.conf`, and for Korean, the filename is `periods_ko.conf`.

You run the `kGenFiscalPeriods.sh` script to generate periods for the time range you specify, for all the languages that have had periods generated in the past. When you use the `-language` script argument and specify languages for which periods have not been generated in the past, the script refers to the corresponding `periods_<language>.conf` files and generates periods for those languages. The script always keeps the sets of generated fiscal periods complete and consistent across all languages in terms of the time range the periods cover.

For detailed procedures on how to use the `kGenFiscalPeriods.sh` script to generate periods, see the document *Generating Fiscal Periods.*

> **Note:** Generating periods for new languages requires restarting the PPM Server.

Translating Descriptions and Reasons in Time Sheet Suggested Items Lists

Time Management creates a Suggested Items list for users to consider when adding items to their time sheets. The list includes **Description** and **Reason** columns to indicate the nature of and rationale for the suggested items. The collection of items offered in the Suggested Items list is controlled by one or more rule definitions, which are XML files.

For *custom* rules, you can create sets of translated **Description** and **Reason** fields for any set of the languages installed in PPM Center, but the process is different than for translation of boilerplate or other custom content. You must separately add your own translations for these fields after you install or upgrade PPM Center.

As described in the *Time Management Configuration Guide,* for each language in which you want translated **Description** and **Reason** values to appear in the Suggested Items list, you create a separate `.properties` file. The filename is correlated to the `<resource-bundle>` tag in the rule definition and is appended with a language code. For example, if the value of the `<resource-bundle>` tag in the rule definition is `suggested_items`, the filename of the `.properties` file with German translations, represented by the language code `_de`, must be `suggested_items_de.properties`.

In the example, for each language you establish a separate `suggested_items_<`*Language_Code*`>.properties` file that includes the translated values for **Description** and **Reason** that are to appear in the Suggested Items list for time sheets.

For detailed procedures on how to create the `.properties` files required to support translations of the **Description** and **Reason** columns in the Suggested Items list, see the *Time Management Configuration Guide.*

Setting Up Multilingual Support for Best Practices

Best Practices content is available in all supported languages. For information about Best Practices content and the requirements for installing it, see the *Installation and Administration Guide.*

To install Best Practices on a PPM Center MLU instance:

1. Follow the instructions for installing PPM Center (see the *Installation and Administration Guide*).
2. On the MLU step, select a system language, and the checkboxes for any additional languages to deploy.
3. Complete the installation.
4. Start the PPM Server.
5. To install Best Practices, navigate to the <*PPM_Home*>\bin directory and run:

   ```
   sh ./kDeploy.sh -best-practices
   ```

6. Stop the server.

   > **Note:** For information on how to stop and start the PPM Server, see the *Installation and Administration Guide.*

7. (Optional) Deploy an additional language:

   ```
   sh ./kDeploy.sh -lang <LP>
   ```

where <*LP*> represents the language code.

8. Start the server.
9. To import translated Best Practices content for your deployed languages, run the following for each language on the PPM Center instance:

   `sh ./kImportAttributes.sh -username admin -password admin-directory <PPM_Home>/mlu/HPContentTranslations/<LP>`

10. To import translated HPE-provided content for your deployed languages, run the following for each language on the PPM Center instance:

    `sh ./kImportAttributes.sh -username admin -password admin -directory <PPM_Home>/mlu/HPContentTranslations/<LP>`

11. After you complete the language deployment, complete the tasks described in "After Language Deployment" on page 31.

Enabling and Disabling Languages

Languages are enabled in PPM Center as soon as you deploy them. Users can see boilerplate PPM Center content in their session language immediately after they log on. However, you may want to make languages unavailable to users until all of the translatable content is in place, and then enable them for users.

To enable or disable a language on a PPM Center instance:

1. Run the `sh ./kConfig.sh` (located in the <*PPM_Home*>`/bin` directory):

   > **Note:** For information on how to run the `kConfig.sh` script on Windows and UNIX systems, see the *Installation and Administration Guide.*

   The PPM Center Configuration wizard starts.

2. From the **Select the language below for this installation** list, select the language that you want the installer to use to display its steps.

   > **Note:** Regardless of the language you select for the configuration wizard to use, the server configuration parameters names are displayed in English.

3. Click **OK.**

   The configuration wizard lists all of the tasks that you can use it to perform.

4. Click **Next.**
5. On the Configuration Options step, select the **MLU (Multilingual UI)** checkbox, and then click **Next.**

   The configuration wizard displays all of the non-system languages deployed on the PPM Center instance.
6. Verify that all non-system languages installed are listed, and then do the following, as necessary:
   - To disable a language, clear the corresponding checkbox.

     > **Note:** Keep in mind that users cannot select a session language that has been disabled.

   - To re-enable a language that has been disabled, select the checkbox for the language.
7. Click **Next.**

   The configuration wizard advises you that your changes are completed.
8. Click **Done** to exit the wizard.
9. Stop, and then restart the PPM Server.
10. Open the PPM Center log-on page and check the **Language** list to verify that the changes you made are reflected are implemented.

After if you disable a language on an upgraded system, the PPM Center database schema may still contain data that is displayed in that language if translations are not available. For example, if an entity was created in a now-disabled language, and the system has no translation for the entity in a user's session language, the attributes of that entity are still displayed in its definition language.

Language Support for Web Service Operations

The system language on your PPM Center instance is used for the web service operations that write data into PPM Center (create and update services). To work with the data in a supported non languages supported (and enabled) on PPM Center, specify the session language in the SOAP header.

PPM Center does not support working with the data in multiple languages in a single web service call. Multiple, separate web service transactions are required, and you must specify the session language for each.

Web service special commands also rely on the selected session language. To work with the data in a different language, you must change your session language.

For information about the Web services available for you to use in your PPM Center deployment, see the *Web Services Guide.*

Installing Unicode Fonts for Export to PDF

The PPM Dashboard supports exporting PPM Center portlet content in PDF format in supported languages. To do this, the PPM Dashboard must have access to Unicode fonts.

The Unicode character encoding standard enables the sharing of messages and other items in a multilingual environment when the languages involved span multiple code pages. This means that translated portlet content is exported to PDF files in multiple languages, in one string, and in different locales.

Some operating systems, such as Windows, provide Unicode fonts. If your PPM Center instance runs on an operating system that does not provide Unicode, you must install a Unicode font on the machine that hosts the PPM Server, and then specify the font location by setting the `com.kintana.core.server.dashboard.PDF-Unicode-Font-File-Path` dashboard server configuration parameter. You can use any Unicode font (for example, Arial Unicode MS or Code2000). You can set additional font directory paths, using the `Fonts-Directory-Path` dashboard server configuration parameter in the `server.conf` file. For information about modifying the `server.conf` file, see the *Installation and Administration Guide.*

The PPM Dashboard looks for a Unicode font in the standard font locations for the operating system. The following table lists the operating system-specific fonts directories.

> **Note:** Unicode is the default mode that the PPM Dashboard uses. However, if it cannot locate a Unicode font, it switches to regular mode.

Operating System	Fonts Location
UNIX	• /usr/openwin/lib/X11/fonts/TrueType • /usr/X11/lib/X11/fonts/TrueType • /usr/X11/lib/X11/fonts/Type1
HPUX	• /usr/contrib/xf86/xterm/fonts • /usr/lib/X11/fonts/ms.st/typefaces
Linux	• /usr/share/fonts/truetype • /usr/share/fonts/local

Operating System	Fonts Location
Windows	• C:\\WINDOWS\\\Fonts • C:\\WINNT\\\Fonts
AIX	/usr/lpp/Acrobat3/Fonts

For information about how to install fonts, see the documentation for your operating system. For information about how to set server configuration parameters, see the *Installation and Administration Guide*.

The dashboard settings do not apply to exporting translated work plans to PDF files. For work plans containing multiple languages, you must update the `<PPM_Home>/server/<PPM_Server_Name>/deploy/itg.war/WEB-INF/conf/FontOptions_<language>.properties` file and change the font to one that supports all the languages used in your work plan.

Chapter 5: Managing Entity Translations

About Entity Translations

While language packs replace the English language text in the user interface with text in a different language, the MLU allows the translation of specific attributes of entities to a different language so that each user sees those attributes in his or her own language, even if a previous user selected the attribute in a different language. Entities are the requests, roles, activities, and other objects you work with when using PPM Center. They are the objects that must be configured before business users can process requests, packages, package lines, project plans, or tasks.

A user's session language determines the language displayed by an entity in PPM Center. For example, if a user selects German as the session language, entities that are translated to German are displayed (in German) in PPM Center. If the entity is not available in the user's session language, PPM Center uses the entity's definition language. For example, if activities are defined in English and have not been translated to German, then a user who selects German as the session language will see activities displayed in English.

Translating Entities

When you translate an entity, you are translating specific attributes of the entity. You can translate an entity's attributes at any time. You can translate all entity attributes at the same time or you may choose to translate specific entity attributes as you need them.

Entities can be broken down into three categories: configuration, master data, and transactional. See "Key Concepts" on page 10 for a definition of these categories.

Translatable Entities

Translatable entities are a specific set of entities (configuration and master data entities) whose attributes can be converted to another language. "Table 5-1. Translatable entity types" on the next page lists these entity types.

If a migrator is available for an entity, you can migrate it from one PPM Center instance to another. Migrating configurations using entity migrators and workflows lets you automate and standardize a change-control process for your PPM Center implementation. For more information on migrating entities, see the *Installation and Administration Guide.*

Table 5-1. Translatable entity types

Entity Type	Entity ID	Migrator Available	Description
Activity	74		Simple categorization of requests, projects, tasks, packages, or miscellaneous. For more information on activities and their use, see the*Financial Management User's Guide*and the *Time Management Configuration Guide.*
Business Objective	68		Business goals that can be prioritized. For more information, see the *Program Management User's Guide.*
Charge Code	76		Link between work items and charge accounts. For more information, see the*Time Management User's Guide.*
Data Sources	505	Yes	Provides data displayed in PPM Dashboard portlets. For more information, see the *Creating Portlets and Modules* and the *Installation and Administration Guide.*
Decisions	29	Yes[a]	Workflow steps that require an external action to determine the outcome. For more information, see *Deployment Management Configuration Guide* and *Demand Management Configuration Guide.*
Executions	28	Yes[a]	Workflow steps that are used to perform specific actions. For more information, see *Deployment Management Configuration Guide.*
Modules	470	Yes	A container for one or more PPM Dashboard pages. For more information, see *Creating Portlets and Modules* and the *Installation and Administration Guide.* **Note:** You cannot export modules using reference codes or primary keys. You can export definitions only for a full list of modules.
Portlet Definitions	509	Yes	Customizable file that defines the look and feel of a portlet. For more information, see *Creating Portlets and Modules* and the *Installation and Administration Guide.*

Table 5-1. Translatable entity types, continued

Entity Type	Entity ID	Migrator Available	Description
			Note: You cannot export portlet definitions using reference codes or primary keys. You can export definitions only for a full list of portlet definitions.
Region	473		Defines the regional calendars for resources and currency display settings. For more information, see the *Financial Management User's Guide* and the *Resource Management User's Guide.*
Report Types	17	Yes	Defines available reports. For more information, see the *Reports Guide and Reference* and the *Installation and Administration Guide.*
Request Header Type	39	Yes	Defines the collection of fields that appear in the header region of requests. For more information, see the *Demand Management Configuration Guide*and the *Installation and Administration Guide.*
Request Status	23		A value linked to a workflow step to drive the request logic during the life of a request. For more information, see the *Demand Management Configuration Guide.*
Request Type	19	Yes	Defines the Web form that users see when they create or view requests. For more information, see the *Demand Management Configuration Guide* and the *Installation and Administration Guide.*
Role	516		Describes resource requirements for resources, staffing profile positions, and tasks. For more information, see the *Resource Management User's Guide.*
Scoring Criteria	529		Qualitative rankings to evaluate proposals, projects, and assets. For more information, see the *Portfolio Management Configuration Guide.* **Note:** You cannot export scoring criteria definitions using reference codes or primary keys. You can export definitions only for a full list of scoring criteria.
Security Group	15	Yes[a]	Specifies members and access grants to control access to specific sections of PPM Center. For more information, see the *Security Model Guide and Reference.*

Table 5-1. Translatable entity types, continued

Entity Type	Entity ID	Migrator Available	Description
Skill	318		Abilities associated with resources. For more information, see the *Resource Management User's Guide.*
User Data	37	Yes	Additional information specific to your business process or organization. For more information, see the *Deployment Management Configuration Guide* and the *Installation and Administration Guide.*
Validations	13	Yes	Determine the acceptable input values for user-defined fields and possible results that a workflow step can return. For more information, see *Commands, Tokens, and Validations Guide and Reference* and *Installation and Administration Guide.*
Workflow	9	Yes	A digitized process composed of a logical series of steps that define a business process. For more information, see the *Deployment Management Configuration Guide,Demand Management Configuration Guide,* and the *Installation and Administration Guide.*
a. Decision and execution entities are migrated with workflows that reference them. Security group entities are migrated with other entities that reference them.			

User Requirements

In order to run the Translation Details and Translation Summary reports, you must have the System: Submit Reports access grant. By default, you have this access grant if you belong to the PPM Administrator or PPM All Access Grants security group.

To use the translation scripts, you must have the Sys Admin: Manage Translations access grant. By default, you have this access grant if you belong to the PPM Administrator or PPM All Access Grants security group.

How to Translate Entities

The following are the basic tasks used to translate entity attributes. For more detailed information about each task, see the corresponding sections.

1. "Identifying Entities to Translate" below. Assess the level of entity translation, determine which attributes have or have not been translated, verify the actual translations, and determine entity IDs and reference codes.
2. "Exporting Attributes" on page 45. Export selected entity attributes to be translated.
3. "Translating Attributes" on page 46. Translate the exported property files.
4. "Verifying Translation" on page 46 View the existing translations and the translations to be imported.
5. "Importing Attributes" on page 47 Import the translated entity attributes.
6. "Migrating Entities" on page 47. Migrate the translated entity attributes to another PPM Center instance.

Identifying Entities to Translate

You should determine the entities that you want to translate before running the export translation script. If you want to translate a specific type of entity or a specific individual entity, make note of its entity ID and reference code/primary key.

Two different translation reports can be run to help identify the entities that need to be translated:

- **Translation Summary report.** Use this report to determine if an entity has been completely, partially, or not translated. The Translation Summary report displays an entity, identifies the definition language of the entity (even if the language is not selected), and displays the level of translation (none, partial, or complete) for each language.
- **Translation Details report.** Use this report to determine the attributes of an entity that have or have not been translated. If the attribute has been translated, you can also verify the translation. The Translation Details report displays an entity's attributes and the translation for each selected language, if the translation exists. An attribute's value displayed in bold text identifies the definition language of the attribute and is displayed even if the language is not selected.

  The Translation Details report also lists and entity's reference code or primary key.

To identify entities and their IDs, codes, and keys:

1. Run the Translation Summary report to determine an entity's level of translation.
   a. From the menu bar, select **Create > Report.** The Submit New Report page opens.
   b. From the Select Report by Category section, select the **Administrative** Report Category.
   c. Click the line for **Translation Summary.** The Submit Report: Translation Summary page opens.
   d. From the Report Parameters section, select the **Languages to show** and any of the entities you want to display. For more information about the Report Parameters, see "Using Translation Summary Report" on page 67. For more information about the other sections on this page, see *Reports Guide and Reference.*
   e. Click **Submit.** The Translation Summary report opens. See "Using Translation Summary Report" on page 67 for more information about this report.
2. Run the Translation Details report to determine the attributes that have been translated, the actual translation, and an entity's reference code or primary key.
   a. From the menu bar, select **Create > Report.** The Submit New Report page opens.
   b. From the Select Report by Category section, select the **Administrative** report category.
   c. Click the line for **Translation Details.** The Submit Report: Translation Details page opens.
   d. From the Report Parameters section, select the **Languages to show** and specify the entities you want to display (or select **Include all**). For more information about the Report Parameters, see "Using Translation Details Report" on page 69. For more information about the other sections on this page, see *Reports Guide and Reference.*
   e. Click **Submit.** The Translation Details report opens. See "Using Translation Details Report" on page 69 for more information about this report.
3. Identify entity IDs.

   Translatable entity types are identified by ID numbers. These numbers are used by the export translation script to specify the entity type to export. For a list of translatable entities and their corresponding IDs, see "Table 5-1. Translatable entity types" on page 40. Make a list of the IDs for the entity types you plan to translate.

Translating Auto-Completes and Drop-Down Lists for Requests

You can define multiple translations for items in auto-complete fields (validated by "List" and "SQL - Custom") and drop-down lists for requests in Demand Management. Suppose, for example, that you have the items in an auto-complete field or a drop-down list for a request type translated into your users' languages. If a user creates a request, users who subsequently log on to PPM Center and specify different session languages see the auto-complete field or drop-down list items for that request in their own languages.

PPM automatically translates items in auto-complete fields or drop-down lists validated by "List". For information about translating items in auto-complete fields validated by "SQL - Custom" and drop-down lists validated by "SQL", see "(Demand Management Only) Custom Auto-Complete Fields and List Fields in MLU" on page 16.

For auto-complete fields not validated by "List" or "SQL - Custom", if the first user allows the auto-complete to appear in his or her language, then the auto-complete items are displayed in that language for the life of the request (unless it is manually overwritten). The situation could become more confusing for users if one set of auto-completes is entered for the first user, then a second set is entered by a second user of another language, then a third set by a third user in yet another language, now we have a form that displays three languages.

Exporting Attributes

After you have identified the entities to be translated, you must export the translatable attributes from PPM Center to property files that can be translated.

To export attributes from PPM Center,

1. On the PPM Server, go to the directory that contains the `kExportAttributes.sh` script:

   `cd <PPM_Home>/bin`

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. You can export all entities, types of entities, or individual entities.

   Enter the following command to export all entities:

```
sh ./kExportAttributes.sh -username <user name> -password
<password> -entityId <entity ID>
```

Enter the following command to export a type of entity:

```
sh ./kExportAttributes.sh -username <user name> -password
<password> -entityId <entity ID> -referenceCode <reference code>

sh ./kExportAttributes.sh -username <user name> -password
<password> -entityId <entity ID> -primaryKey <primary key>
```

By default, property files are generated for the entity and its children and zipped to the `file <PPM_Home>/mlu/definitions/attributes_<lang>.zip` where <*lang*> is the language code that specifies the definition language of the entity.

You can specify the filename and its directory by including additional options. For more information about the options available with the translation export script, see "Running Export Script" on page 58.

The exported property files are ready for translation.

Translating Attributes

PPM Center does not generate nor provide the actual translations for exported property files. You must translate the property files (for example, by using a translation management tool or a company that provides translations) before you can import them back into PPM Center. Using the property files provides a standard way to manage translations and enables the use of third-party translation tools that can provide change management capabilities for your translations.

Verifying Translation

Before importing the translations back into PPM Center, you can view a Translation Impact report that displays the existing translations and the new translations that will be imported.

To view the Translation Impact report,

1. On the PPM Server, go to the directory that contains the `kImportAttributes.sh` script:

   `cd <PPM_Home>/bin`

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. Enter the following command to generate the Translation Impact report:

```
sh ./kImportAttributes.sh -username <user name> -password
<password> -mode test
```

By default, all files in the directory <*PPM_Home*>/mlu/translations/ are used to generate the Translation Impact report. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Export Script" on page 58.

After running the command, open the file <*PPM_Home*>/mlu/translations/TranslationImpactReport.html to view the Translation Impact report.

Importing Attributes

Once you are satisfied with the translations, you can import them into PPM Center.

1. On the PPM Server, go to the directory that contains the kImportAttributes.sh script:

   ```
   cd <PPM_Home>/bin
   ```

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. To import the attributes, run:

   ```
   sh ./kImportAttributes.sh -username <user name> -password
   <password>
   ```

   By default, all files in the directory <*PPM_Home*>/mlu/translations/ are imported. You can specify a file name and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Import Script" on page 66.

Migrating Entities

Entity migrators are Deployment Management object types. Each migrator is designed to migrate a specific kind of PPM Center entity and all of its dependent objects, except translations, from one PPM Center instance to another. See the *Installation and Administration Guide* for more information about migrating entities.

> **Note:** The following scenarios assume that you have already translated your entities.

> Existing translations of an entity (on the target instance) are deleted when that entity is migrated. If you are only migrating entities but want to preserve their translations on the target system, you must first export the translations on the target system before migrating your entities. If you are migrating both your entities and translations, always migrate your entities before importing translations on the target instance.

Migrating Translations Only

If you are only migrating translations, you must export your translations on the originating instance, copy them to the target instance, and import them on the target instance. Do the following:

1. On the originating instance, go to the directory that contains the `kExportAttributes.sh` script:

   `cd <PPM_Home>/bin`

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. You can export all entity translations or you can export each entity's translation, one at a time.

   Enter the following command to export all entities:

   `sh ./kExportAttributes.sh -username <username> -password <password> -t`

   Enter the following command to export a single entity:

   `sh ./kExportAttributes.sh -username <username> -password <password> -entityId <entityID> -t`

   By default, property files are generated for the entity and its children and zipped to the file <*PPM_Home*>`/mlu/definitions/attributes_<`*lang*`>.zip` where <*lang*> is the language code that specifies the definition language of the entity.

   You can specify the filename and its directory by including additional options. For more information about the options available with the translation export script, see "Running Export Script" on page 58.

3. Copy the zipped property file(s) to the <*PPM_Home*>`/mlu/translations/` directory on the target instance.

4. On the target instance, go to the directory that contains the `kImportAttributes.sh` script:

   `cd<`*PPM_Home*`>/bin`

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

5. Enter the following command to generate the Translation Impact report to verify the translations:

   `sh ./kImportAttributes.sh -username <username> -password <password> -mode test`

By default, all files in the directory <*PPM_Home*>/mlu/translations/ are used to generate the Translation Impact report. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Import Script" on page 66.

After running the command, open the file <*PPM_Home*>/mlu/translations/TranslationImpactReport.html to view the Translation Impact report.

6. Enter the following command to import the entities:

   sh ./kImportAttributes.sh -username <*username*> -password <*password*>

   By default, all files in the directory <*PPM_Home*>/mlu/translations/ are imported. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Import Script" on page 66.

Migrating Entities Only

If you are only migrating entities but are maintaining translations on the target instance, you must export your translations on the target instance, migrate your entities, and import your translations. Do the following on the target instance:

1. Go to the directory that contains the kExportAttributes.sh script:

   cd<*PPM_Home*>/bin

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. Export your translations.

   sh ./kExportAttributes.sh -username <*username*> -password <*password*> -t

   By default, property files are generated for the entity and its children and zipped to the file <*PPM_Home*>/mlu/definitions/attributes_<*lang*>.zip where <*lang*> is the language code that specifies the definition language of the entity.

   You can specify the filename and its directory by including additional options. For more information about the options available with the translation export script, see "Running Export Script" on page 58.

3. Migrate your entities to the target instance. See the *Installation and Administration Guide* for more information about migrating entities.

4. Enter the following command to generate the Translation Impact report to verify the translations:

```
sh ./kImportAttributes.sh -username <username> -password <password> -mode test
```

By default, all files in the directory <*PPM_Home*>/mlu/translations/ are used to generate the Translation Impact report. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Import Script" on page 66.

After running the command, open the file <*PPM_Home*>/mlu/translations/TranslationImpactReport.html to view the Translation Impact report.

5. Enter the following command to import the entities:

```
sh ./kImportAttributes.sh -username <username> -password <password>
```

By default, all files in the directory <*PPM_Home*>/mlu/translations/ are imported. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Export Script" on page 58.

Migrating Entities and Their Translations

If you are migrating both entities and their translations, you must export your translations from the originating instance, copy the translations to the target instance, migrate your entities, and import your translations on the target instance. Do the following:

1. On the originating instance, go to the directory that contains the kExportAttributes.sh script:

```
cd<PPM_Home>/bin
```

where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. On the originating instance, export your translations.

```
sh ./kExportAttributes.sh -username <username> -password <password> -t
```

By default, property files are generated for the entity and its children and zipped to the file <*PPM_Home*>/mlu/definitions/attributes_<*lang*>.zip where <*lang*> is the language code that specifies the definition language of the entity.

You can specify the filename and its directory by including additional options. For more information about the options available with the translation export script, see "Running Export Script" on page 58.

3. Copy the zipped property file(s) to the <*PPM_Home*>/mlu/translations/ directory on the target instance.

4. Migrate your entities to the target instance. See the *Installation and Administration Guide* for more information about migrating entities.
5. On the target instance, go to the directory that contains the `kImportAttributes.sh` script:

   `cd<PPM_Home>/bin`

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.
6. On the target instance, enter the following command to generate the Translation Impact report to verify the translations:

   `sh ./kImportAttributes.sh -username <username> -password <password> -mode test`

   By default, all files in the directory <*PPM_Home*>`/mlu/translations/` are used to generate the Translation Impact report. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Import Script" on page 66.

   After running the command, open the file <*PPM_Home*>`/mlu/translations/TranslationImpactReport.html` to view the Translation Impact report.
7. On the target instance, enter the following command to import the entities:

   `sh ./kImportAttributes.sh -username <username> -password <password>`

   By default, all files in the directory <*PPM_Home*>`/mlu/translations/` are imported. You can specify a filename and its directory to import by including additional options. For more information about the options available with the translation import script, see "Running Import Script" on page 66.

Working with Translated Entities

When working with translated entities (creating, editing, copying, or deleting), there may be additional options available to select. When editing an entity, you may be able to change the definition language. When copying an entity, there may be an additional option to copy the existing translations. When creating or deleting an entity, there are no additional options.

What you are allowed to do with an entity depends on your access grants. See the *Security Model Guide and Reference* for more information.

Creating Entities

There are no additional options when creating an entity.

When an entity is created, the session language determines the definition language of the entity. For example, if you are logged in to a Korean session, the definition language of any entity you create is Korean. You cannot explicitly configure the definition language of an entity. However, you can change the definition language to the current session language. See "Changing Definition Language" below for more information.

Editing Entities

Entities can only be edited in their definition language. You cannot edit an entity if your session language is different from the entity's definition language. If an entity has been created in PPM Center, the definition language displays at the top of the page. If an entity has been created in the PPM Workbench, the definition language displays at the bottom of the entity's window.

If you want to edit an entity whose definition language differs from the session language, you must change the definition language. Otherwise, you can edit the entity as usual if its definition language is the same as your session language.See for more information, see "Changing Definition Language" below.

Changing Definition Language

How you access the option to change the definition language of an entity depends on where the entity was created (in PPM Center or in the PPM Workbench). If an entity was created in PPM Center, you can change its definition language by selecting a link on the entity's page. If an entity was created in the PPM Workbench, you can change its definition language by selecting a menu option.

Changing Definition Language of an Entity Created in PPM Center

To change the definition language of an entity created in PPM Center:

1. Log on to PPM Center and select the session language to which you want to change the definition language of the entity.
2. Select the entity.

3. At the top of the page, look for the text that states the definition language.

   For portlet definitions, click **here** to open the Language Options dialog.

   For all other entities, click **Why?** to open the Language Options dialog.

4. Click **Change Definition.** The definition language of the selected entity is changed to the session language.

   > **Note:** You are not prompted to verify this action. Once you click **Change Definition,** the definition language is changed. To undo this change, you must log on using the session language to which you want to change the entity and follow the steps above.

Changing the Definition Language of an Entity Created in the PPM Workbench

To change the definition language of an entity created in the PPM Workbench:

1. Log on to PPM Center and select the session language to which you want to change the definition language of the entity.
2. Select **Open > Administration > Open Workbench.**
3. Find and select the entity.
4. From the menu bar, select **File > Language Options** to open the Language Options dialog.
5. Click **Change Definition.** The definition language of the selected entity is changed to the session language.

   > **Note:** You are not prompted to verify this action. Once you click **Change Definition,** the definition language is changed. To undo this change, you must log on using the session language to which you want to change the entity and follow the steps above.

Copying Entities

How an entity is copied depends on where the entity was created (in the PPM Workbench or in PPM Center).

From the PPM Workbench, when an entity is copied, the session language determines the definition language of the created entity. For example, if you are logged in to a Korean session and you copy an entity defined in German, the newly created entity's definition language is Korean. You cannot explicitly configure the definition language of an entity. However, you can change the definition language to the current session language. See "Changing Definition Language" on page 52 for more information.

If the copied entity has translations for the current session language, those translations are used. For example, if you are logged in to a Korean session and are copying a German-defined entity with English and Korean translations, the Korean translations are used. The copy of the German-defined entity becomes a Korean-defined entity with English and German translations.

If the copied entity is partially translated to the current session language, you can choose to either use the existing definition language translations for the attributes with no translations, or you can leave those attributes blank (for future translation). By default, the attributes are left blank. To use the existing language translations, select the **Copy existing translations** checkbox. For example, if you are logged in to a Korean session and are copying a German-defined entity with English and partial Korean translations, if you do not select the checkbox, the attributes that are not translated in Korean are blank. If you select the checkbox, the attributes that are not translated in Korean use the German translations. In both cases, the Korean-defined entity has English and German translations.

If the copied entity does not have translations, you do not see the **Copy existing translations** checkbox.

From PPM Center, you can copy modules, portlets, and portlet definitions.

You can copy modules and portlets from any definition language to any session language. The session language determines the definition language of the created entity. For example, if you are logged in to a Korean session and you copy a module defined in German, the newly created module's definition language is Korean.

To copy a portlet definition, its definition language and the session language must be the same. For example, to copy a portlet defined in German, you must be logged on with German as your session language. You can change the definition language to match the current session language. See for more information.

If the copied module, portlet, or portlet definition is partially translated to the current session language, the untranslated attributes use the existing definition language translations. For example, if you are logged in to a Korean session and are copying a German-defined entity with English and partial Korean translations, the attributes that are not translated to Korean are displayed in German.

Deleting Entities

When you delete an entity, all translations for the entity are also deleted. The session language and definition language of the entity do not matter. That is, you can be logged in to a Korean session and delete a German-defined entity.

MLU Support for Private Pages

The private pages that you create in PPM Center do not have multilingual support. This means that names, descriptions and portlet titles are the same for all language sessions, and if you change one of the attributes, it is changed for all language sessions. So, for example, if you add a portlet to a page, the portlet title remains the same, regardless of the selected session language, even though the content in the body of the portlet is displayed in the selected session language. In addition, if you add a portlet to a page within a module, the portlet title remains the same, regardless of the selected your session language, but you can add translations for different supported languages.

Chapter 6: Using Translation Management Tools

Introduction to Translation Management Tools

This section describes how to use the following translation management tools:

- The `kExportAttributes.sh` script is used to export entity attributes to be translated, in (zipped) `.properties` files. You can export the attributes of:
  - All entities
  - Specific types of entities, such as all request types
  - Specific individual entities, such as the PFM - Asset request type

  The script generates a `.zip` file containing the `.properties` files that are exported.

  You can also export existing translations.
- The `kImportAttributes.sh` script is used to import translations of entity attributes. This script can be run in test mode to generate a Translation Impact report for review and to obtain all errors and warnings, without importing the translated entity attributes.

  > **Note:** In this section, the `kExportAttributes.sh` script is also referred to as the export script, and the `kImportAttributes.sh` script is also referred to as the import script.
- The Translation Summary report, which shows, for the set of entities and languages you select, the language in which each entity is defined and the other languages to which it has been translated or partially translated.
- The Translation Details report, which shows, for the set of entities and languages you select, the entity definition in bold (under its definition language) and the translations in the other languages you specify.

> **Note:** Importing entities translations from another PPM instance will fail because the UUID of some entities are different between different PPM instances. HPE suggests that you export and import translations of entities attributes within one PPM instance.

Exporting Entity Attributes or Existing Translations

> **Note:** To run the export script (`kExportAttributes.sh`), you must have the Sys Admin: Manage Translations access grant.

When you run the export script, you can export the attributes of all entities or specify one particular entity for which you want to export attributes. The entities are listed in"Table 6-1. Entity types and their children and entityId values" on page 62.

PPM Center keeps track of the language in which each entity is defined. In general, HPE recommends using the original definition as the basis for any translations into other languages. Then, by default, the export script exports entity attributes in the language in which they were defined.

You can also run the export script to export some or all of the existing translations. This is useful if you will need to import all the translations simultaneously by using the import script in an instance migration scenario.

For each language in which any entity attributes to be exported are defined, the script generates:

- A set of `.properties` files, one for each PPM Center database table used by the entity's attributes. In other words, exporting an attribute that uses multiple database tables generates multiple `.properties` files. The `.properties` files conform to Java standards, including the <*key*>=<*value*> format for the attributes. (The keys can be lengthy.)

  The names of the `.properties` files begin with PPM Center database table names, and you do not need to be concerned about their naming convention. The names are appended with "_" and a unique language code from the subset of languages in ISO standard 639-1 that are supported by Oracle , and potentially "_" and another unique two-character country code from the subset of codes in ISO standard 3166-1 that are supported by Oracle.

- One `.zip` file containing the set of `.properties` files for that language.

  You specify the beginning of the name of the `.zip` file when you run the export script. The `.zip` file is appended with "_" and the same language code (and, potentially, "_" and the same country code) as the `.properties` files.

Examples:

- If you export request types that were all defined in English, and if you specify `FromPPM` as the `filenameRoot` (see the table in Step 2), the export script generates one `.zip` file named `FromPPM_en.zip`, containing `.properties` files with the request type attributes.
- If, in the example above, some request types were defined in English and others were defined in German, the export script generates two `.zip` files named:
  - `FromPPM_en.zip`, containing `.properties` files with the request type attributes in English.
  - `FromPPM_de.zip`, containing `.properties` files with the request type attributes in German.

The results are analogous when exporting existing translations, except that the `.properties` files already exist. As with exporting entity attributes, the export script creates a `.zip` file for each language.

Running Export Script

To run the export script:

1. On the PPM Server, navigate to the directory that contains the `kExportAttributes.sh` script:

   `cd <PPM_Home>/bin`

   where <*PPM_Home*> represents the path where your PPM Center instance is installed.

2. Run the following script:

   ```
   sh ./kExportAttributes.sh -username <user name>
     -password <password> [options]
   ```

   where the options are as described in the following table.

   > **Note:** If you specify valid values for `-username` and `-password` but you do not specify any options, the script exports all translatable attributes in PPM Center in their respective definition languages to the default directory, using the default root filename.

Option	Description
-entityId <*entity ID*>	The identifier of the single *type of* entity for which attributes are to be exported. See "Table 6-1. Entity types and their children and entityId values" on page 62 for valid values. For example, to export attributes of all

Option	Description
	request types, specify: `-entityId 19` You cannot specify multiple values.
-referenceCode <*reference code*>	The reference code of the particular entity for which attributes are to be exported. Not all entities have reference codes. Entity reference codes that can be seen in the PPM Workbench are indicated in"Table 6-1. Entity types and their children and entityId values" on page 62. The `-entityId` option must be specified. For example, to export attributes of the PFM - Asset request type, specify: `-entityId 19 -referenceCode _PFM_ASSET` Multiple values separated by commas can be specified. If neither the `-referenceCode` option nor the `-primaryKey` option is specified, attributes of the entity type specified for the `-entityId` option are exported.
-primaryKey <*primary key*>	The primary key of the particular entity for which attributes are to be exported. Primary keys are part of the database and cannot be seen by most users, but, if known, this option is used under limited circumstances as an alternative to specifying the `-referenceCode` option. The `-entityId` option must be specified. Multiple values separated by commas can be specified. This option is ignored if the `-referenceCode` option is also specified. If neither the `-referenceCode` option nor the `-primaryKey` option is specified, the attributes of the entity type specified for the `-entityId` option are exported.

Option	Description
-includeChildren <Y|N>	Whether to also include attributes of child entities in the exported files. If unspecified, the default is `Y`, which includes attributes of the children. Set this option according to your company's translation management process. For information about parents and their children among entity types, see "Values of -entityId and Children of Each Entity Type" on the next page.
-filenameRoot <*filename*>	Root filename (left-most part of the filename) to be given to the `.zip` file that the script generates. "_" and a two-character language code that conforms to ISO standard 639-1, as in `_en` for English, is appended. In addition, "_" and a two-character country code that conforms to ISO standard 3166-1 can be appended to the language code, as in `_pt_BR` for Brazilian Portuguese. If unspecified, the root filename is `attributes`, so the file the script generates for English, for example, is named `attributes_en.zip`.
-t	Exports translation files only, to the directory specified in the `-directory` option. If unspecified, the default is to export attribute definitions only, and not translation files. The `-includeChildren` option determines whether the attributes of the entities' children are also exported; the default is `Y`. Set the option according to your company's translation management process.
-directory <*directory*>	Directory to which the `.zip` files generated by the script are to be exported. If unspecified, the default is<*PPM_Home*>`/mlu/definitions` for entity attributes to be exported, and <*PPM_*

Option	Description
	Home>/mlu/translations for translations to be exported.

The export script generates .zip files, one per language, having the name <*filenameRoot*>_<*language*>.zip, where <*language*> is a two-character language code that identifies the language of the attributes it contains. A two-character country code might also be appended to the filename. The .zip files contain .properties files as described in "Exporting Entity Attributes or Existing Translations" on page 57.

For example, after substituting valid values for the username and password, you might run the script as follows to export attributes for request types (entityId 19) that are defined in English to the <*PPM_Home*>/mlu/definitions/FromPPM_en.zip file:

```
sh ./kExportAttributes.sh -username admin -password pw      -entityId 19 -
filenameRoot FromPPM
```

If all the request types are defined in the same language—for example, English, German, or Korean—the exported .properties files will be contained in a .zip file named as shown in the following table:

Definition Language	Example Filename of Exported Files
English	FromPPM_en.zip
German	FromPPM_de.zip
Korean	FromPPM_ko.zip

Log files are saved as described on screen.

For an example of the content of an unzipped .properties file, see "Example of an Exported, Unzipped Properties File" on page 63.

Values of -entityId and Children of Each Entity Type

When you run the export script, you can specify the -entityId option for one particular entity type for which you want to export attributes. The entity types are listed in "Table 6-1. Entity types and their children and entityId values" on the next page. If you run the export script with no -username, -password, or options, that is, if you run sh ./kExportAttributes.sh, the same set of entity types and entityId values as shown in "Table 6-1. Entity types and their children and entityId values" on the next page are listed on screen.

Some entities include additional "child" entities in their logical models, as shown in"Table 6-1. Entity types and their children and entityId values" below. For example, a request type includes all of the child request header types, request statuses, and validations used by the request type fields. By default, the export script exports the attributes (or translations) of all child entities along with the attributes (or translations) of their parent entity. If you need to exclude the child entities from the exported files, specify `-includeChildren N` in the script command.

Table 6-1. Entity types and their children and entityId values

Entity Type	Children of Entity Type	entityId Value to Use for the Export Script
Activities		74
Business Objectives		68
Charge Codes		76
Data Sources [a]	Validations	505
Decisions [a]	Validations	29
Executions [a]	Validations	28
Modules	Portlets	470
Portlet Definitions		509
Regions		473
Report Types [a]	Validations	17
Request Header Types [a]	Validations	39
Request Statuses [a]		23
Request Types [a]	Request Header Types Request Statuses Validations	19
Roles		516
Scoring Criteria [b]		529
Security Groups [a]		15
Skills		318
User Data	Validations	37
Validations [a]	Validations	13
Workflows [a]	Validations	9

Table 6-1. Entity types and their children and entityId values, continued

Entity Type	Children of Entity Type	entityId Value to Use for the Export Script
a. This entity has a reference code that can be seen in the PPM Workbench. b. All scoring criteria can be exported but individual scoring criteria must not be exported.		

Translation Constraints Identified in Exported Properties Files

Comments in the exported `.properties` files describe important constraints such as the maximum length the translated strings can have. The comments are provided so that translators will take the constraints into account. (The comments do not need to be translated.)

Translations can be imported only if the constraints are met.

Example of an Exported, Unzipped Properties File

When you export an entity type, the export script first creates one or more `.properties` files with comments and content is in the <*key*>=<*value*> format, and then compresses them into one `.zip` file. For example, if you export request types that are defined in English, one of the `.properties` files that is created is named `KCRT_REQUEST_TYPES_NLS_en.properties.` When unzipped from the `.zip` file and opened in an editor, it could begin as follows (reformatted here for readability):

```
#This content of this file was exported from PPM for translation purposes
#Fri Feb 06 13:43:31 PST 2009

#An item belongs to table KCRT_REQUEST_TYPES_NLS and column DESCRIPTION. Value
should not exceed
the length of 400.

KCRT_REQUEST_TYPES_NLS.BK BUG.DESCRIPTION=Bug Request type

#An item belongs to table KCRT_REQUEST_TYPES_NLS and column REQUEST_TYPE_NAME.
Value should not exceed the length of 80.Value has to be unique.Value must
not be null.

KCRT_REQUEST_TYPES_NLS.BK BUG.REQUEST_TYPE_NAME=Bug
```

```
#An item belongs to table KCRT_REQUEST_TYPES_NLS and column
CREATION_ACTION_NAME. Value should not exceed the length of 80.

KCRT_REQUEST_TYPES_NLS.BK DEM_APPLICATION_BUG.CREATION_ACTION_NAME=Report an
Application Bug

#An item belongs to table KCRT_REQUEST_TYPES_NLS and column DESCRIPTION. Value
should not exceed
the length of 400.

KCRT_REQUEST_TYPES_NLS.BK DEM_APPLICATION_BUG.DESCRIPTION=Application bugs
should be used to report
problems in current IT applications.

#An item belongs to table KCRT_REQUEST_TYPES_NLS and column REQUEST_TYPE_NAME.
Value should not exceed the length of 80.Value has to be unique.Value must not
be null.

KCRT_REQUEST_TYPES_NLS.BK DEM_APPLICATION_BUG.REQUEST_TYPE_NAME=
DEM - Application Bug
Using Translation Management Tools

                                                83
#An item belongs to table KCRT_REQUEST_TYPES_NLS and column
CREATION_ACTION_NAME. Value should not exceed the length of 80.

KCRT_REQUEST_TYPES_NLS.BK DEM_APPLICATION_ENHANCEMENT.CREATION_ACTION_NAME=
Request an Application
Enhancement
.
.
.
```

Importing Translated Entities

> **Note:** To run the import script (`kImportAttributes.sh`), you must have the Sys Admin: Manage Translations access grant.

The import script `kImportAttributes.sh` can operate on any combination of:

- Individual `.properties` files
- `.zip` files that include only `.properties` files

Before you import a `.properties` file, make sure it is ASCII encoded. You can use the built-in Java utility `native2ascii` included in PPM Center to perform this encoding. (Most commercially available translation management tools perform the encoding automatically.)

The following example converts a file that is UTF-8 encoded to ASCII

```
native2ascii -encoding UTF-8 <input file> <output file>
```

When you import translations, their languages must be supported (previously installed) on PPM Center.

> **Note:** You cannot import scoring criteria definitions using referenceCode or primaryKey. You can export definitions only for a full list of scoring criteria.

The `.properties` filename(s) and .zip filename(s) to be imported must be appended with "_" followed by a two-character language code from the subset of languages in ISO standard 639-1 that are supported by Oracle. The filename(s) can be further appended with "_" followed by a two-character country code from the subset of codes in ISO standard 3166-1 that are supported by Oracle.

Examples:

- `ToPPM_en.properties` for English
- `ToPPM_de.zip` for German
- `ToPPM_pt_BR.properties` for Brazilian Portuguese

Data in the `.properties` files must use the Java standard format: *<key>=<value>*.

By default, files will be imported from the `<PPM_Home>/mlu/translations` directory. However, you can save them elsewhere on the PPM Server and specify that path when you run the import script.

Translation Impact Report

Before importing the data, HPE recommends that you generate and review a Translation Impact report by running the import script with the `-mode test` option. The report is saved at the location shown on screen when you run the script.

For each file to be imported, for new or updated translations only, the report displays:

- The key for each attribute
- The attribute's original value in its definition language

- The existing translation (if any) of the attribute in the language to be imported
- The new translation of the attribute in the language to be imported

As reflected in the Translation Impact report, importing unmodified translation files, including translation files previously exported using the export script, has no impact.

Review the quality of the new translations. If there are errors, determine how you want to proceed. You can import some properties files and not others, or you might be able to edit some of the files (in collaboration with any translation service you might use).

After running the import script with the `-mode test` option and reviewing the report, run the import script without the `-mode test` option to import the translations to PPM Center.

Running Import Script

To run the import script:

1. On the PPM Server, navigate to the directory that contains the `k`ImportAttributes`.sh` script:

   `cd <`*`PPM_Home`*`>/bin`

2. Run the following script:

   `sh ./kImportAttributes.sh -username <`*`user name`*`>`

   `-password <`*`password`*`> [options]`

   where the options are as described in the following table.

Option	Description
-file <*Filename*>	The name of the file to import. If unspecified, all files in the specified `-directory` are imported.
-directory <*Directory_Path*>	The directory in which the files to be imported are located. If unspecified, the default is `<`*`PPM_Home`*`>/mlu/translations.`
-mode <*Mode*>	Value of <*mode*> is `test` or `import.` If unspecified, the default is `import.`

For example, after substituting valid values for the `username` and `password`, run the script in test mode as follows:

```
sh ./kImportAttributes.sh -username admin -password pw  -mode test
```

The script runs and generates the Translation Impact report. If the script is run without the `-mode test` option, it imports the specified files.

Log files are saved as described on screen.

> **Note:** In general, the import script does not overwrite attributes in their definition languages. (However, installing a language pack provided by HPE can do so.)

Using Translation Summary Report

The Translation Summary report provides a high-level overview of the state of translations in PPM Center. For the languages and entity types you select, the report shows the language in which each individual entity is defined and whether it is translated, partially translated, or not translated into the other languages. Children of the parent entities you select are automatically listed in the report, but each entity in the report is listed only once.

The report fields and descriptions are as shown in "Figure 6-1. Translation Summary report fields" on the next page and described in "Table 6-2. Translation Summary report field descriptions" on the next page.

Figure 6-1. Translation Summary report fields

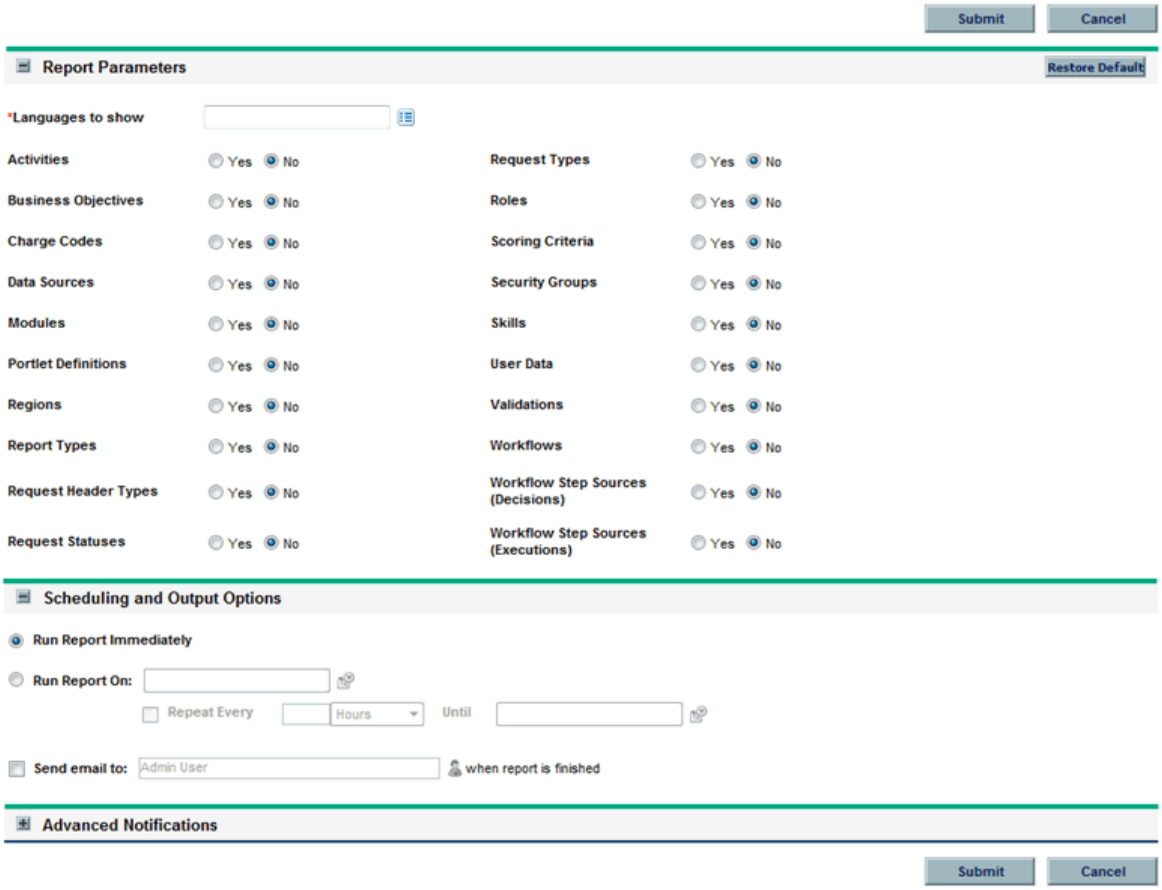

Table 6-2. Translation Summary report field descriptions

Field Name (*Required)	Description
*Languages to show	Determines the languages for the report.
Activities	Determines whether the report includes data for every activity.
Business Objectives	Determines whether the report includes data for every business objective.
Charge Codes	Determines whether the report includes data for every charge code.
Data Sources	Determines whether the report includes data for every data source.
Modules	Determines whether the report includes data for every module.
Portlet Definitions	Determines whether the report includes data for every portlet definition.
Regions	Determines whether the report includes data for every region.

Table 6-2. Translation Summary report field descriptions, continued

Field Name (*Required)	Description
Report Types	Determines whether the report includes data for every report type.
Request Header Types	Determines whether the report includes data for every request header type.
Request Statuses	Determines whether the report includes data for every request status.
Request Types	Determines whether the report includes data for every request type.
Roles	Determines whether the report includes data for every role.
Scoring Criteria	Determines whether the report includes data for every scoring criterion.
Security Groups	Determines whether the report includes data for every security group.
Skills	Determines whether the report includes data for every skill.
User Data	Determines whether the report includes data for every type of user data.
Validation	Determines whether the report includes data for every validation.
Workflows	Determines whether the report includes data for every workflow.
Workflow Step Sources (Decisions)	Determines whether the report includes data for every decision workflow step source.
Workflow Step Sources (Executions)	Determines whether the report includes data for every execution workflow step source.

Using Translation Details Report

The Translation Details report provides details of translatable entities. For the languages and entity types (or particular entities) you select, the report shows the entity definition in bold (under its definition language) and the translations in the other languages. Different entities can have different definition languages. Children of the parent entities you select are automatically listed in the report, but each entity in the report is listed only once.

The report fields and descriptions are as shown in "Figure 6-2. Translation Details report fields" on the next page and described in "Table 6-3. Translation Details report field descriptions" on the next page. Specifying particular entities using an auto-complete overrides the associated option to the right to include all entities of that type.

Figure 6-2. Translation Details report fields

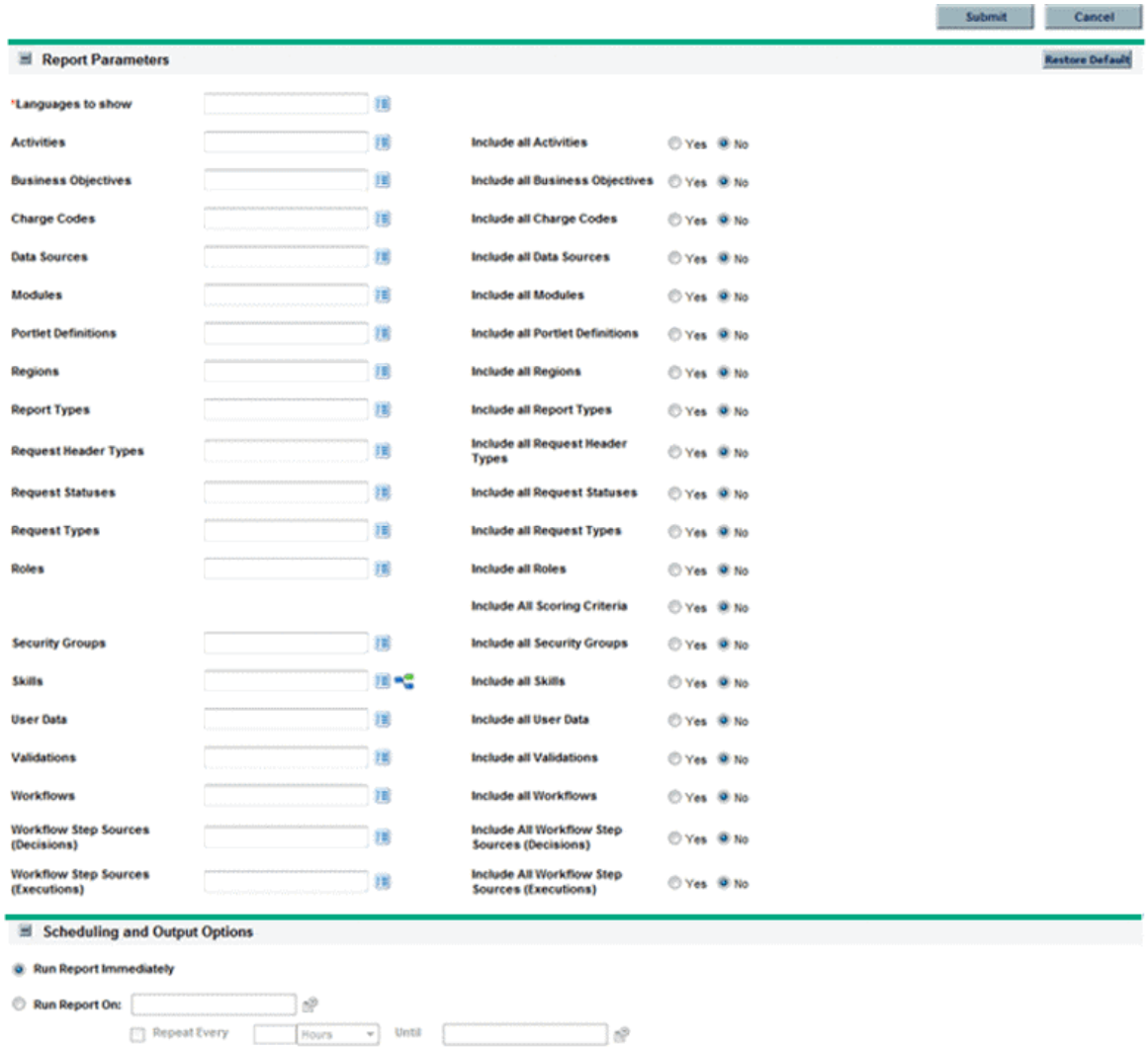

Table 6-3. Translation Details report field descriptions

Field Name (*Required)	Description
*Languages to show	Select the languages for the report.
Activities	Select particular activities for the report.
Include all Activities	Select whether the report will include data for all activities.
Business Objectives	Select particular business objectives for the report.
Include all Business Objectives	Select whether the report will include data for all business objectives.
Charge Codes	Select particular charge codes for the report.

Table 6-3. Translation Details report field descriptions, continued

Field Name (*Required)	Description
Include all Charge Codes	Select whether the report will include data for all charge codes.
Data Sources	Select particular data sources for the report.
Include all Data Sources	Select whether the report will include data for all data sources.
Modules	Select particular modules for the report.
Include all Modules	Select whether the report will include data for all modules.
Portlet Definitions	Select particular portlet definitions for the report.
Include all Portlet Definitions	Select whether the report will include data for all portlet definitions.
Regions	Select particular regions for the report.
Include all Regions	Select whether the report will include data for all regions.
Report Types	Select particular report types for the report.
Include all Report Types	Select whether the report will include data for all report types.
Request Header Types	Select particular request header types for the report.
Include all Request Header Types	Select whether the report will include data for all request header types.
Request Statuses	Select particular request statuses for the report.
Include all Request Statuses	Select whether the report will include data for all request statuses.
Request Types	Select particular request types for the report.
Include all Request Types	Select whether the report will include data for all request types.
Roles	Select particular roles for the report.
Include all Roles	Select whether the report will include data for all roles.
Include All Scoring Criteria	Select whether the report will include data for all scoring criteria.
Security Groups	Select particular security groups for the report.
Include all Security Groups	Select whether the report will include data for all security groups.

Table 6-3. Translation Details report field descriptions, continued

Field Name (*Required)	Description
Skills	Select particular skills for the report.
Include all Skills	Select whether the report will include data for all skills.
User Data	Select particular user data for the report.
Include all User Data	Select whether the report will include data for all user data.
Validations	Select particular validations for the report.
Include all Validations	Select whether the report will include data for all validations.
Workflows	Select particular workflows for the report.
Include all Workflows	Select whether the report will include data for all workflows.
Workflow Step Sources (Decisions)	Select particular decision workflow step sources for the report.
Include All Workflow Step Sources (Decisions)	Select whether the report will include data for all decision workflow step sources.
Workflow Step Sources (Executions)	Select particular execution workflow step sources for the report.
Include All Workflow Step Sources (Executions)	Select whether the report will include data for all execution workflow step sources.

Appendix A: A Supporting Multiple Languages in Plug-in for PPM

PPM Center integrates with Microsoft Project using the Plug-in for PPM. Both PPM Center and Microsoft Project provide support for multiple languages. The Plug-in for PPM also supports multiple languages. Setting the language for the Plug-in for PPM provides standard translations of static interface elements of the PPM Center menu in Microsoft Project. The languages supported by the Plug-in for PPM depend on the properties files that have been translated and deployed.

Setting the language for the Plug-in for PPM may also define the language of the content returned by PPM Center, depending on the language packs that are deployed on the PPM Server. If the language pack for the selected Plug-in for PPM language is installed on the PPM Server, PPM Center returns content in the selected language. If the language pack for the selected Plug-in for PPM language is *not* installed on the PPM Server, PPM Center returns content in PPM Center's system language.

By default, the Plug-in for PPM supports the following languages: Dutch, English, French, German, Italian, Japanese, Korean, Portuguese, Russian, Simplified Chinese, Spanish, and Turkish. Users can select one of these languages from the PPM Plugin Preferences page (see the *Project Management User's Guide* for information about how users can select the language of the Plug-in for PPM).

Adding Languages to Plug-in for PPM

If you want the Plug-in for PPM to support additional languages (adding a language that is not provided by default), do the following:

1. Install the Plug-in for PPM. The files that must be translated are installed with the Plug-in for PPM. See the *Project Management User's Guide* for information on how to install the Plug-in for PPM.
2. On the system on which the Plug-in for PPM is installed, go to the *<Plug-in for PPM installation>*`\Hewlett Packard\PPM Add In for MS Project\PPM Plugin MSProject 200`*<x>*`\Resources` directory (where *<x>* denotes the version of Microsoft Project, either 2003 or 2007). This directory contains the properties files that need to be translated, the translated properties files for the default languages provided by the Plug-in for PPM, and translated properties files provided by any installed language packs.
3. Translate the `TextResources.properties` and `MspTextResources.properties` files. Translated

files are named `TextResources_<xx>.properties` and `MspTextResources_<xx>.properties` where *<xx>* is the language code of the translated files. For example, `TextResources_es.properties` is the properties file translated to Spanish and `TextResources_zh_CN.properties` is the properties file translated to simplified Chinese.

At a minimum, the `MspTextResources.properties` file should be translated for the Microsoft Project languages you want to support. This ensures the Plug-in for PPM loads when Microsoft Project is started.

> **Note:** If the user selects a Microsoft Project language that is not supported by the Plug-in for PPM, a warning message displays and the user may choose to try to connect to PPM Center. If the `MspTextResources.properties` file has been translated for this language, the Plug-in for PPM will load. If the `MspTextResources.properties` file has not been translated for this language, the Plug-in for PPM will not load.

4. In all of the translated files, do the following:

   a. Change the value of the `VERSION` key.

      Changing the version ensures that the properties files are updated on the client system when the Plug-in for PPM connects to the PPM Server.

   b. Optionally, define the language of the content returned by the PPM Server (content such as boilerplate text, master data, and translatable resources). By default, the content language is the system language of PPM Center (for definitions of terms such as boilerplate text and system language, see "Key Concepts" on page 10).

      To define the content language, set the `PPM_LANGUAGE_CODE` key. Set the value to the language defined in the `NLS_LANG_CODE` column of the `KNTA_LANGUAGES` table (the value is the string that appears before the underscore).

      For example, to view the PPM Server content in Ukrainian when the Plug-in for PPM language setting is defined as Ukrainian, both the `TextResources_uk.properties` and the `MspTextResources_uk.properties` files should contain the following key and value:

      ```
      PPM_LANGUAGE_CODE=UKRAINIAN
      ```

      If the value of `PPM_LANGUAGE_CODE` is not valid, the content language defaults to the system language of PPM Center.

5. Optionally, define the content that is displayed for each item in the Language field drop-down list of the PPM Plugin Preferences page (this may have already been done in "Adding Languages to Plug-in for PPM" on the previous page).

In the `TextResources.properties` and `TextResources_<xx>.properties` files, add the key `LANGUAGE_NAME_<XX>` where <*XX*> is the language code of the added language (in uppercase). Set the value to the name of the language as it would appear in the language of the file.

For example, if the current Plug-in for PPM language selections are English and German and you are adding the Plug-in for PPM in Swahili, in the English properties file (`TextResources.properties`), you would add the key and value `LANGUAGE_NAME_SW=Swahili.` In the German translated file (`TextResources_de.properties`), you would add the key and value `LANGUAGE_NAME_SW=Suaheli.` In the Swahili translated file (`TextResources_sw.properties`), you would add the keys and values `LANGUAGE_NAME_EN_US=Kiingereza` (for English), `LANGUAGE_NAME_DE=Kijerumani` (for German), and `LANGUAGE_NAME_SW=Kiswahili` (for Swahili).

If you add this key to only the `TextResources.properties` file, these values become the default items displayed in the Language field drop-down list of the PPM Plugin Preferences page for all languages. For example, if your language selections are English, German, and Swahili and if you add `LANGUAGE_NAME_EN_US=Kiingereza, LANGUAGE_NAME_DE=Kijerumani,` and `LANGUAGE_NAME_SW=Kiswahili` to the `TextResources.properties` file (and do not update any other `TextResources_<xx>.properties` files), the Language field always displays the items of Kiingereza, Kijerumani, and Kiswahili. If you select the Plug-in for PPM language setting to be English, the Language field displays the items of Kiingereza, Kijerumani, and Kiswahili. If you select the Plug-in for PPM language setting to be German, the Language field displays the items of Kiingereza, Kijerumani, and Kiswahili.

If you do not add this key to any of the properties file, the items in the Language field drop-down list of the PPM Plugin Preferences page are defined by the .NET Framework language. For example, if your language items are English, German, and Swahili, and if the .NET Framework language is English, the Language field displays the items of English, German, and Swahili. If the .NET Framework language is German, the Language field displays the items of Englisch, Deutsch, and Suaheli.

The precedence of what determines the content that is displayed for each item in the Language field drop-down list of the PPM Plugin Preferences page is (listed from highest to lowest):

- `TextResources_<xx>.properties`
- `TextResources.properties`
- .NET Framework language

6. Copy the translated files to the <*JBoss_server*>`/conf/custom_resources/msp` directory on the PPM Server.

   After the user connects to the PPM Server using the Plug-in for PPM, the added language appears as a selection in the Language field drop-down list of the PPM Plugin Preferences page.

Updating Translated Files

Translated files should be updated on the PPM Server. After the updates are completed, when a user connects from the Plug-in for PPM to the PPM Server, the files are updated on their instance of the Plug-in for PPM.

> **Note:** New strings added to the properties files on the PPM Server are added to the matching properties files on the Plug-in for PPM instance. Updated strings in the properties files on the PPM Server are updated in the matching properties files on the Plug-in for PPM instance. Strings that exist only on the Plug-in for PPM instance are not modified.
>
> Therefore, changes may be made directly to the properties files on the Plug-in for PPM instance. However, if those strings are added to and updated on the properties files on the PPM Server, those strings will be updated on the Plug-in for PPM instance (changes made directly to the properties files on the Plug-in for PPM instance may be overwritten).

To update the translated files:

1. Go to the <*JBoss_server*>`/conf/custom_resources/msp` directory on the PPM Server and update the files.
2. For each file that is updated, change the value of the `VERSION` key.

   Changing the version ensures that the properties files are updated on the client system when the Plug-in for PPM connects to the PPM Server.

   > **Note:** Updates to the translated files occur if the version numbers are different. Even if the version number in a file on the PPM Server is lower than the version in the related file on the Plug-in for PPM instance, because the version numbers are different, the file on the Plug-in for PPM instance is updated.

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