Release 1850

Service Request 82219

2008 Web Merit Roster Enhancements - Phase II

Detail Design

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Introduction

Service Request 82219

Service Request 82219 asks for the following Roster-related enhancements to the Web Merit online application:

1. Create a PDF file of the Roster by choosing a selection in the “Select Download” dropdown.
2. Allow zero merit increases in the Web Merit Rosters.
3. Allow users to open or save the Roster page download file in Excel format.
4. Change the RGC error code behavior on step based and open range rosters.
5. Exclude the START DOS codes from the Costing Summary Pop-up costing calculations.
6. Change the fiscal year begin date calculation logic in the costing on Employee Detail Page.

Release 1830 addressed 2, 4, 5, and 6 of the enhancements listed above. Enhancements 1 and 3 will be addressed in this release.

Error Report 2160

In the Web Merit Update Cycle screen, the sub-location is not displayed correctly.

Error Report 2167

In the Web Merit Add Cycle and Web Merit Update Cycle screens, when entering an invalid value in the Control Percent field, an SQL Error is encountered.

Error Report 2171

The Recommended Increase field in a regular step-based Merit Roster screen is blanked out on certain types of employees.

Error Report 2175

The Web Merit Range-Based Roster screen incorrectly displays an error message when deleting existing Performance Evaluation Date and Rating on an RGC employee.
Overview of PPS Modifications

Web Merit Cycle Administration Pages

1. The Control Percent value entered by the user on the Web Merit Add Cycle or Web Merit Update Cycle screens is validated and converted to a valid number. The validated value will be populated back to the screen.

2. On the Web Merit Update Cycle screen, the methods used for comparing the sub location field values between database and screen will be corrected to remove blank spaces around the field.

Web Merit Roster Pages

1. Currently, the Roster page download feature downloads the whole roster or deleted roster records as a text file. This roster downloads feature (Download Roster and Download Deletes) will be modified so that the files are produced in Microsoft Excel format (.xls), rather than as text files. In addition, the numeric data of the download (e.g., Employee ID, Title Code, Department Code, etc.) will be in a “text” format to retain their leading zeros.

2. A new download option “Roster PDF” will be added under the “Select Download” dropdown list to create a PDF file containing the entire Roster currently being viewed. Costing details and designated signoff area will be added at the end of the PDF file so that it can print a copy of the entire Roster for approval purposes. See Attachment A for a sample of the printed Roster.

3. On the Web Merit Range-Based Roster screen, “RGC” employees are assigned a default value of “0.00” in the Percent Increase and Annual Increase fields. This will be changed to assign a blank default value for the two fields.

4. On the Web Merit Step-Based Roster screen, the method to calculate the Recommended Increase does not cater to missing Current Step value in the database. It will be changed to assume the value to be “0.0” if not available in the database.

JasperReports is an open-source J2EE compliant report-generating tool used to format content for the screen, either for printing, or for creating PDF, HTML, XLS, CSV, and XML files. JasperReports will be used to produce the PDF and Excel formatted files for this project.

Web Merit Parameters

File login.properties contains various user defined parameters. Currently this file is internal to the application. Since different installations have different values for some of the parameters, it is required to edit this file each time before installation. Also, this design does not work well within the clustered server environment. Therefore, login.properties file will be made external to the web merit application.
Java Changes

Classes
Web/JavaSource/classes

StepPdfRosterDownload.java (new)
StepPdfRosterDownload.java defines data for the jasper object and invokes the jasper utility to print the PDF report of the step based roster-related data.
This class will have a method to set all the PDF related data for the jasper object.

RangePdfRosterDownload.java (new)
RangePdfRosterDownload.java defines data for the jasper object and invokes the jasper utility to print the PDF report of the range based roster-related data.
This class will have a method to set all the PDF related data for the jasper object.

StepXlsRosterDownload.java (new)
StepXlsRosterDownload.java defines data for the jasper object and invokes the jasper utility to print the Excel report of the step based roster-related data.
This class will have a method to set all the Excel related data for the jasper object.

RangeXlsRosterDownload.java (new)
RangeXlsRosterDownload.java defines data for the jasper object and invokes the jasper utility to print the Excel report of the range based roster-related data.
This class will have a method to set all the Excel related data for the jasper object.

Display Beans
Web/JavaSource/displayBeans

RosterJasperReportPdfObject.java (new)
RosterJasperReportPdfObject.java defines the report object for the Jasper PDF Download report. The field names defined in this object must match exactly as the field names used in the jasper report templates.

RosterJasperReportXlsObject.java (new)
RosterJasperReportXlsObject.java defines the report object for the Jasper Excel Download report. The field names defined in this object must match exactly as the field names used in the jasper report templates.

CycleBaseObject.java
CycleBaseObject.java defines the java bean for Cycle object.
The Methods isSelected() and ischecked() are used to check if the database value of sub-location is equal to the sub-location value in the screen. Because of the spaces at the end, the check sometimes fails, though the values are equal. Both the
database and the screen sub location strings will be trimmed before checking for equality. This resolves the problem of sub-location not being displayed correctly on the Web Merit Update Cycle screen.

**Data Access Beans**

**RosterDataAccessBean.java**

RosterDataAccessBean.java reads and updates database for roster related data. It will be modified as follows:

- The recommended increase is calculated as the difference between the values of “new step” and “current step” using the calcDifference() method. For some records, PPS does not have a value for current step. This method will ignore such records and return the difference as “blank” making the previously displayed value disappear from the screen. This method will be changed to treat a “blank” current step value as zero, and return the value of “new step” as the recommended increase. This resolves the problem of Recommended Increase field getting blanked out for certain types of employees in the step-based Merit Roster screen.

- The SQL used for the data selection will be modified to support the new “DOWNLOADPDF” roster mode.

**Java Event Handlers**

Web/JavaSource/eventHandlers

**RosterHandler.java**

RosterHandler.java is the Event handler program for roster related events. It will be modified as follows:

- Define a new method calculateCosting, move the calculation logic from Roster Mode “COST” to this new method, and call this new method from here.

- When the Roster Mode is “DOWNLOADPDF”, call the getRosterData method to get the roster details and the new method calculateCosting() to get the costing details of the roster data. In addition, call the appropriate servlet method based on step-based or range-based roster to generate PDF report.

- When the Roster Mode is “DOWNLOAD”, call the getRosterData method to get the roster details. In addition, call the appropriate servlet method based on step-based or range-based roster to generate Excel file.

- Create processStepBasedDownload() method for step based Excel download.

- Create processRangeBasedDownload() method for range based Excel download.

- Create processStepBasedDownloadPdf() method for step based PDF download.

- Create processRangeBasedDownloadPdf() method for range based PDF download.

- All of the above four methods will do the following:
  - Define the content type of the file to be an Excel file or PDF file and set the file name based on the Cycle Id.
  - Define an array list that will be passed as a data source to jasper template. Populate the display bean RosterJasperReportXlsObject or RosterJasperReportPdfObject with the roster data and costing data.
  - Call the appropriate jasper routines based on download time and roster type using the array list of roster rows as the data source.

**Parameters**

Web/JavaSource/parameters
Parm.java

Parm.java is the parameters retrieval program for Web Merit and the parameters defined here are loaded during the initial startup of the system. It will be modified as follows:

- Read JVM variable WEBMERIT_PROPERTY_HOME to identify the location of login.properties file. If the JVM variable WEBMERIT_PROPERTY_HOME is not defined, then use the default login.properties file as supplied with the Web merit application.
- If the JVM variable WEBMERIT_PROPERTY_HOME is defined, read the external login.properties file to load various user parameters.

Jasper Reports (new)

Web/Webcontent/jasper - jasper template (.jasper) and jasper created code (.jxml)

The Jasper reports tool iReport produces the following two files for each designed report: a jasper template and jxml generated code.

RosterStepDownloadPdf.jasper & .jxml (new)

RosterStepDownloadPdf is the jasper report template for the step based PDF file download.

The jasper classes that will be invoked by Web Merit will use RosterStepDownloadPdf.jasper template to fill the data and produce the PDF report.

RosterRangeDownloadPdf.jasper & .jxml (new)

RosterRangeDownloadPdf is the jasper report template for the range based PDF file download.

The jasper classes that will be invoked by Web Merit will use RosterRangeDownloadPdf.jasper template to fill the data and produce the PDF report.

RosterStepDownloadXls.jasper & .jxml (new)

RosterStepDownloadXls is the jasper report template for the step based Excel file download.

The jasper classes that will be invoked by Web Merit will use RosterStepDownloadXls.jasper template to fill the data and produce the Excel report.

RosterRangeDownloadXls.jasper & .jxml (new)

RosterRangeDownloadXls is the jasper report template for the range based Excel file download.

The jasper classes that will be invoked by Web Merit will use RosterRangeDownloadXls.jasper template to fill the data and produce the Excel report.

Web Pages

Web/Webcontent/Pages

RosterRangeBased.jsp

RosterRangeBased.jsp is the web page for the range-based rosters.

It will be modified to add “Roster PDF” as one of the selections in the dropdown box at both the top and bottom of the range-based roster screen display.
For employees with “RGC” code, Percent Increase and Annual Increase fields are hidden from the user and are assigned a value of “0.00” The assigned value will be changed to “blank” so that Evaluation Date and Performance Rating are not required to be entered by the user. This resolves the problem of incorrectly displaying an error message when deleting existing Performance Evaluation Date and Rating on an RGC employee.

**RosterStepBased.jsp**

RosterStepBased.jsp is the web page for the step-based rosters.

It will be modified to add “Roster PDF” as one of the selections in the dropdown box at both the top and bottom of the step-based roster screen display.

**JavaScript**

Web/Webcontent/javascript

**RosterRangeBased.js**

RosterRangeBased.js is the JavaScript program that validates range based roster form data.

It will be modified to set the mode value to “DOWNLOADPDF”, if the selection from the roster screen is “Roster PDF”.

For employees with “RGC” code, certain edits are bypassed. This results in the record not being flagged for database updates. This will be changed so that database is updated if the user changes Evaluation Date and/or Performance Rating. This resolves the problem related to the changes applied for an RGC employee, where the changes were not being saved in the database.

**RosterStepBased.js**

RosterStepBased.js is the JavaScript program that validates step based roster form data.

It will be modified to set the mode value to “DOWNLOADPDF”, if the selection from the roster screen is “Roster PDF”.

**AdminCycle.js**

AdminCycle.js is the JavaScript program that validates data entry on the add and update cycle screens.

The Control Percent entered by the user is validated and converted to number. The converted value will be assigned back to the screen field. This resolves the problem of encountering an SQL Error when user enters an invalid value in the Control Percent field in the Web Merit Cycle Add or Update screen.
## Attachment A - Printed Roster PDF Format

**STEP BASED MERIT ROSTER**

**MRV-TX-MAY-2008**

**Department: 444444 - UCOP IR&C ADMIN**

**Cycle Status:** Open for Departmental Input

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Note: RSM: new step set to maximum step available in TCT.