1. Introduction

The Rally Connector for Oracle Primavera P6 (hereafter simply called 'P6') allows customers to use Rally for Agile lifecycle management while using P6 for its extensive project management and tracking capabilities. The connector provides uni-directional updates from time entries on tasks in Rally to the Actual Labor Units of linked P6 Activities.

The connector is currently in a "proof of concept" stage.

The connector runs as a Ruby script on Windows, Linux, and OS X. It is configured by changing the values of various constants in a Ruby file. A log file is created to track all changes made in P6 by the connector.

1.2 Overview of Features

In Rally, developers typically decompose stories into tasks, and update progress on those tasks as they work on them. Rally's timesheet feature allows hours worked to be entered daily for each task for which a developer is responsible.

Tasks are associated with P6 activities by entering the Activity ID in a custom field defined on the task.

When the connector runs, it gathers all time entries for a specified Rally workspace and project, sums the values by Rally task, and populates the Actual Labor Hours field for the associated P6 Activity with the total hours entered in Rally.

2. Pre-Installation Requirements

2.1 Software/Hardware Requirements

The following are the hardware and software requirements to install and run the connector:

- A Rally subscription. Administrator privileges are needed for installation and setup, but not to run the connector. You'll need to know the URL for the Rally server hosting your subscription; for example, **sandbox.rallydev.com**
- An installation of Oracle Primavera P6 and Primavera P6 Integration API and P6 Web Services R8. You'll need to know the URL of the P6 web services endpoint; for example, **http://10.32.13.193:7001/p6ws**

- A computer with network access to the Rally and P6 servers, and Ruby version 1.9.x and Rubygems installed. On Windows, we recommend using the one-click installer available at http://rubyinstaller.org/downloads/.

  Note: When the one-click installer presents options for "add Ruby executables to PATH" and "associate .rb files", check those boxes before continuing.

  The proof of concept connector was tested using Ruby version 1.9.2-p180.

2.2 Pre-Installation Checklist

- Perform a check to make sure that at least the WSDLs for P6 Web Services are available by pointing a browser to http://10.32.29.203:7001/p6ws/services/ProjectService?wsdl. You should see an XML document containing the WSDL types for the Project service.

2.3 Implementation Plan

We recommend an implementation plan similar to the following:

Configure the connector to use a test Workspace and Project on Rally Sandbox (https://sandbox.rallydev.com/slm) and a test project in Primavera P6. Rally Sandbox is a copy of Production data and expects your Production login credentials.

Run the service on the test environment and ensure the data is copied/updated between the two systems successfully. Review **rallylog.log** (located in the same directory as rally2_primavera.rb) to see if any unexpected errors are encountered.

3. Installation

Basic Installation Steps

1. Install the connector files.
2. Set up a custom field in Rally and set that field for tasks linked to P6 activities.
3. Edit rally2_primavera.rb to reflect the particulars of your environment.
4. Run rally2_primavera.rb to start the update process

3.1 Install the Rally Connector for Primavera P6 Source Files

1. Open up a command shell, cd to an installation directory of your choice (hereafter called <install_dir>), and extract the contents of rally2_primavera.zip to that directory. **unzip** will extract the files Linux or Mac OS X. On Windows, navigate to <install_dir> in Windows Explorer, right-click on the zip file, and select **Extract All ...**

2. Install the required Ruby gems by entering:

```
sudo gem install rally_rest_api  --no-rdoc --no-ri
sudo gem install builder  --no-rdoc --no-ri
sudo gem install savon  --no-rdoc --no-ri
```

and supplying the sudo password. On Windows, enter the same commands, without the 'sudo' prefix. Answer **yes** to any questions about installing required dependencies.

3.2 Make changes in Rally

3.2.1 Create a custom P6 field in Rally of type String

1. Log in to Rally as an Administrator
2. Select Setup mode (upper right corner)
3. Click on the Workspaces and Projects tab
4. Click on your P6 test Workspace (create it if necessary)
5. With the test Workspace selected, click on Work Products and Fields
6. Select Tasks from the dropdown
7. When the list of fields for Tasks is displayed, select New Field ... from the Actions dropdown
8. In the Create Field dialog, create a new field with:

Name: **P6Activity**
Display Name: **P6Activity**
Type: **String**

3.2.2 Locate (or add) tasks in Rally that should be linked to P6. For each task in Rally, set the value of the custom field you created above (e.g. P6Activity) to the ID of the associated activity in P6. For test purposes, set the owner for each task to be yourself.

3.2.3 Go to the Timesheet sub-tab on the My Home tab in Rally and click on the Add My Tasks button. The tasks you linked to P6 in the step above should be displayed. Enter hours for some of those tasks.

3.3 Edit rally2_primavera.rb

Open rally2_primavera.rb in an editor and set the values of the following constants to reflect the particulars of your environment. All values except RUN_INTERVAL must be enclosed in single or double quotes.

RALLY_USERNAME	Rally user name	'employee@company.com'
RALLY_PASSWORD	Rally password	'mypassword'
RALLY_URL	URL of Rally server	'sandbox.rallydev.com'
RALLY_WORKSPACE	Rally workspace name	'Swordfish'
RALLY_PROJECT	Name of Rally project containing tasks to be mapped to P6 activities	'IT Strategy'
P6_USERNAME	Primavera P6 user name	'admin'
P6_PASSWORD	Primavera P6 password	'adminpassword'
P6_URL	URL of P6 web service endpoint	'http://server:7001/p6ws'
P6_PROJECT_ID	The ID of a P6 project containing activities to be mapped to Rally tasks	'IT00351'
RUN_INTERVAL	Length of the "sleep"period between connector runs, in minutes	5

3.4 Running the Service

You can start the service on OS X or Linux by entering:

```
ruby rally2_primavera.rb
```

On Windows, if Ruby was installed using the One-Click Ruby Installer from rubyinstaller.org , you can simply open a command shell and type:

```
rally2_primavera.rb
```

Otherwise, if the ruby interpreter is in your Windows PATH, you should be able to type:

```
ruby rally2_primavera.rb
```

to start the service.

In P6, locate the Activities you linked to Rally tasks. The Actual Labor Hours field should reflect the hours you entered for the corresponding tasks in Rally. It may be helpful to open up <install_dir>rallylog.log in an editor (such as Windows Notepad) to see what the connector did.

To stop the service, use Control-C in the command shell. The service can also be run in the background (Linux and OS X) or via a scheduled task in Windows, in which case the 'ps' command or Windows Task Manager can be used to find the process id of the rally2_primavera service and kill it.