Profile Setup v.0.1.0

for the Planetary Data System

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1.1 Overview

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About Profile Setup

The Profile Setup software provides a web interface to set up a new, basic profile for the Report Service. It also provides functionality to manage the transfer of remote logs for Apache, Tomcat, and FTP to the Engineering Node to be used by the service. Transferring the logs to the Engineering Node provides the PDS Discipline Nodes with an extra backup of the logs, as well as a more stable and secure way for the Report Service to calculate the metrics from them.

Please send comments, change requests and bug reports to the PDS Operator at pds_operator@jpl.nasa.gov.

1.2 **Release Notes**

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Release Notes

The purpose of this section is to provide a description of a Report Service release with respect to the Profile Setup component including any impact that the new or modified capabilities will have on the Discipline Nodes or the PDS user community. If viewing the web-based version of this document, a somewhat itemized list of changes for each release can be found on the Release Changes page.

Release 0.1.0

This release of the Profile Setup application is a component of the integrated release 1.2.0 of the PDS 2010 System. This release is intended as a prototype release in support of the assessment of the PDS4 standards and the system components to date. This release includes initial capabilities for setting up Sawmill profiles.

1.3 **Installation**

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Installation

This section describes how to install the Profile Setup software web application contained in the *profile-setup* package. The following topics can be found in this section:

- System Requirements
- Unpacking the Package
- Creating and Loading the Database
- Configuring Database Access
- Configuring Environment
- Deploying the Application

System Requirements

The Profile Setup web application was developed using Java and jQuery and will run under a standard Java Application Server. The application was specifically developed under Sun Java version 1.6, so the tool will execute correctly under versions 1.6 or later.

Since the tool was developed using Sun's Java, the target Java Application Server should support Sun's Java Runtime Environment (JRE). The application was tested using Apache's Tomcat version 5.5.X, which is the preferred Java Application Server for deployment. The software can be obtained from the Apache Tomcat web site. Other Java Application Servers should be compatible.

The Profile Setup software also requires a MySQL Server installation for hosting the Report Service database. The application was tested using the Community Server 5.X.X.

The web application also requires that Sawmill (8.X.X) be installed on the local machine in order for the software to perform its duty of configuring profiles for the service as needed. See the Sawmill Installation instructions for more detail.

Unpacking the Package

Download the *profile-setup* package from the internal PDS Maven repository. The binary distribution is available in identical zip or tar/gzip packages. Unpack the selected binary distribution file with one of the following commands:

```
[node: ~] unzip profile-setup-0.1.0.zip
or
[node: ~] tar -xzvf profile-setup-0.1.0.tar.gz
```

Note: Depending on the platform, the native version of *tar* may produce an error when attempting to unpack the distribution file because many of the file paths are greater than 100 characters. If available, the GNU version of tar will resolve this problem. If that is not available or cannot be installed, the zipped package will work just fine in a UNIX environment.

The commands above result in the creation of the *profile-setup-0.1.0* directory with the following directory structure:

- **README.txt**

   A README file directing the user to the available documentation for the project.

- **LICENSE.txt**

   The copyright notice from the California Institute of Technology detailing the restrictions regarding the use and distribution of this software. Although the license is strictly worded, the software has been classified as Technology and Software Publicly Available (TSPA) and is available for *anyone* to download and use.

- **profile-setup-0.1.0.war**

   This is the Web Archive (WAR) file containing the Profile Setup software including all dependent JAR files. The application is intended to be hosted on the Engineering Node site but can be hosted elsewhere.

- **conf/**

   This configuration directory contains the SQL dump script for the Report Service database.

- **doc/**

   This document directory contains a local web site with the Profile Setup Guide, javadoc, unit test results and other configuration management related information. Just point your favorite browser to the *index.html* file in this directory.

Creating and Loading the Database

The Profile Setup software requires a MySQL Server instance to host the Report Service database. If the target environment does not already have a MySQL Server instance installed, have an instance installed before continuing the installation. The software can be obtained from the MySQL web site.

Once the MySQL Server instance is installed and/or identified, the database and user account for theProfile Setup software must be created. The following commands detail the steps for logging into the server, creating the database and creating the user account to access the database:

```
% mysql -u root -p
Enter password:

mysql> create database {database};
Query OK, 1 row affected (0.00 sec)

mysql> grant all on {database}.* to {username}@localhost identified by '{password}';
Query OK, 0 rows affected (0.00 sec)
```

The values contained in the {} must correspond with the values in the *database.properties* file. See the Configuring Database Access section for more details. Now that the database and corresponding account are available, it is time to load the database with a MySQL dump that contains the necessary tables for the database. The following commands will load the database:

```
% cd profile-setup-0.1.0/conf

% mysql -u {username} -p{password} {database} < report_service_db.sql
```

The above command can be run against a previously populated database since the script drops and recreates the tables each time it is loaded. Also note that there are no spaces between the *-p* argument and the password value.

Configuring Database Access

The Profile Setup sofware comes preconfigured to access the MySQL database instance on the operational machine. If this configuration requires modification, the WAR file will need to be unpacked and the *./WEB-INF/classes/database.properties* file modified. The file contents are as follows:

```
datasource.url=jdbc:mysql://{node}:{port}/{database}
datasource.driver=com.mysql.jdbc.Driver
datasource.user={username}
datasource.password={password}
```

Modify the values contained in the {} according to the desired MySQL database instance, save the file and repack the WAR file.

Configuring Environment

The Profile Setup software comes preconfigured to create and modify Sawmill profiles as well as transfer web logs from remote locations. In order to ensure stable functionality, several environment variables must be set prior to application deployment. If this configuration requires modification, the WAR file will need to be unpacked and the *./WEB-INF/classes/environment.properties* file modified. The file contents are as follows:

```
sawmill.home={sawmill_home}
sawmill.profile.home={sawmill_home}/LogAnalysisInfo/profiles
sawmill.log.home={log_home}  # Where the logs should be copied
```

Modify the values contained in the {} according to the desired machine directories, save the file and repack the WAR file.

Deploying the Application

The Profile Setup web application is packaged as a WAR file and is intended for installation under a standard Java Application Server. Prior to installation the WAR file should be renamed from *profile-setup-0.1.0.war* to *profile-setup.war*. A WAR file is normally copied directly to the *webapps* directory or installed via the Manager interface. Once this step is complete, the application is ready for operation.

1.4 **Operation**

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Web Application Operation

The Profile Setup software is a web application for setting up a new profile for the Report Service, and provides functionality to transfer a nodes web logs to the Engineering need for use in the Service. The application is available from the Engineering Node site at http://pdsops.jpl.nasa.gov/profile-setup/ . The main screen of the application is as follows:

If viewing this document in online form, click the image for a larger version.

The user may begin by either entering the necessary information in the appropriate text fields in order to create a new profile, or select one from the drop-down list to modify.

Command-Line Operation

The logs transferred from remote nodes must be updated regularly as more logs become available. This can either be done manually or on a cron job basis. To run the transferLogs.sh script, unpack the WAR file, and run the script from the *./WEB-INF/classes/* directory. The script uses the database.properties and environment.properties files to access the MySQL database and rsync all new web logs to the specified storage location. A decryption password is also required in order to read the encrypted password foy MySQL (Contact System Administrator). To run the script, go to the *./WEB-INF/classes/* directory in the unpacked WAR and change the permissions of the transferLogs.sh and decrypt.sh files:

```
chmod 700 transferLogs.sh
chmod 700 decrypt.sh
```

The run the script as follows:

```
./transferLogs <decrypt_password>
```