



DataMiner 2.0 API Guide

PJM Interconnection

I. Introduction

Welcome to the PJM API Integration specification for PJM Data Miner 2 - Beta. In this Introduction, you will find the following information:

- What you can expect from this PJM User Guide (see “About This User Guide”).

A. *About This User Guide*

The PJM User Guide will provide instructions for New User Registration, User Profile Management and Access to API Integration Specifications for PJM Data Miner 2 - Beta. The documentation is applicable strictly for purpose of Beta testing. A comprehensive information and user guide will be made available before Go Live.

PJM Data Miner 2 replaces Data Miner, and is PJM’s enhanced data management tool, giving members and non-members easier, faster and more reliable access to public data formerly posted on pjm.com. The API Integration specs for Data Miner 2 provides steps to register for a free API key and after approval you can start consuming the APIs as well as access detailed API specification available upon signing in.

II. Data Miner 2 API Integration Specification - Beta

Welcome to the PJM Data Miner 2 API Integration Specification section for Beta testing. Data Miner 2 replaces Data Miner, and is PJM’s enhanced data management tool, giving members and non-members easier, faster and more reliable access to public data formerly posted on pjm.com. You can discover and learn about the APIs that PJM Interconnection provides for Data Miner 2.

In this section you will find the following information:

- A description of how to register for API developer Portal
- A description of how to logon into the Portal
- A description of how to manage your account profile
- A description of how to access the API Integration Specs

Access to Data Miner 2 API Developer Portal

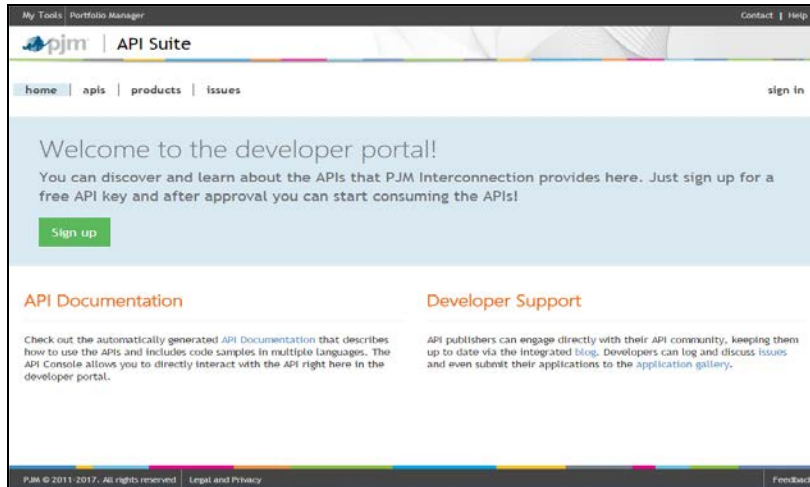
The API Developer Portal for purposes of participating in Beta testing can be accessed using the following URL:

<https://apiportal-train.pjm.com/>: Users can register for an account or sign in to their existing account from this page

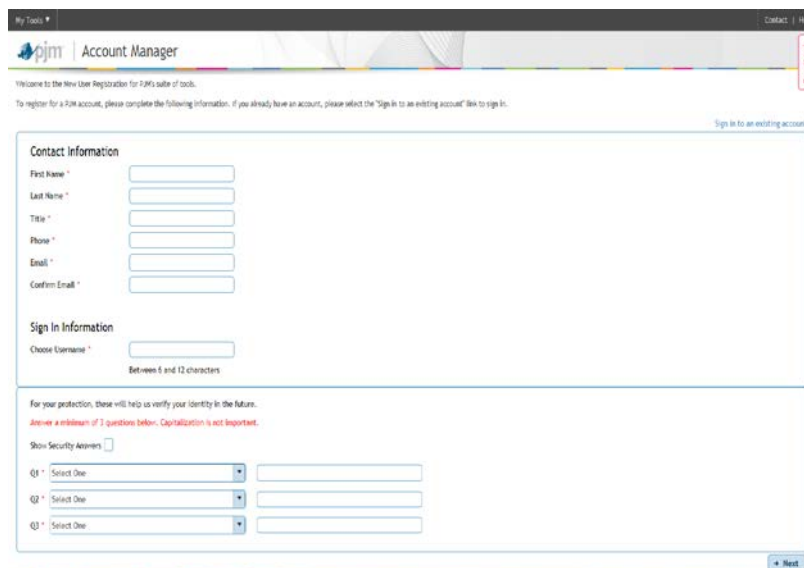
New User Registration

In order to gain access to API portal and access the specifications, a user must register for a PJM account via the API developer portal. The steps identified below show in detail how a user can register for a new account

A new user can register for a new account in API Developer Portal by navigating to the URL below: <https://apiportal-train.pjm.com/> or <https://accountmanagetrain.pjm.com/accountmanager/pages/public/new-user.jsf>

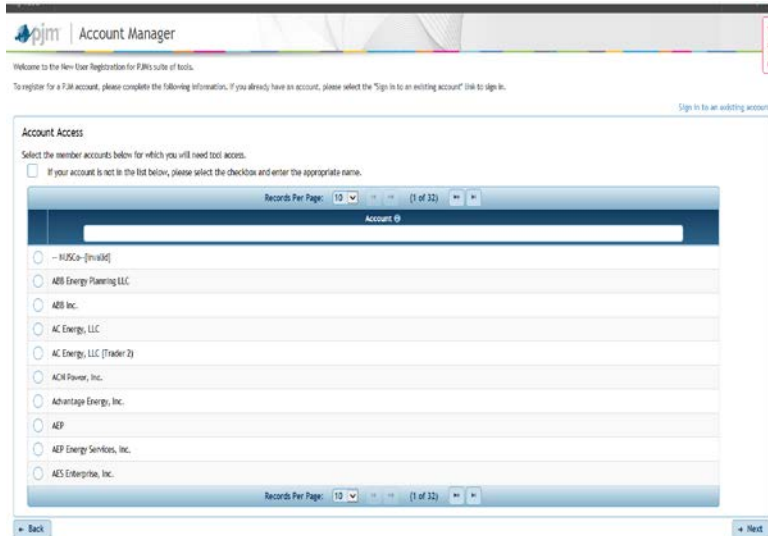


1. Select "Sign up" to create a new account. On the next screen, Select "Register" to create a new account. The screen below will prompt the user to fill out their contact information. User will also need to answer minimum of 3 security questions. These security questions are used to verify the user identity and protect their account. It will also allow the users to reset their password through the Forgot Password link for self-service capability. The answers must be between 5 –50 characters. When completed, select "Next"

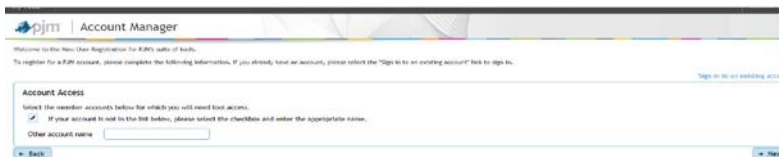


2. On the next page, chose your organization from the list provided by clicking the button on left hand side. Note that you can type the complete or partial name of the organization in the textbox and hit Enter to search by

name. If your company account does not exist, the Account Access page below provides an option to the user to select the checkbox to enter their company account name, which will create the account without tools access (default tool access only), or the user can select the Company for which the user is requesting tools access. Slect the organization name and clicc on Next to complete the registration.



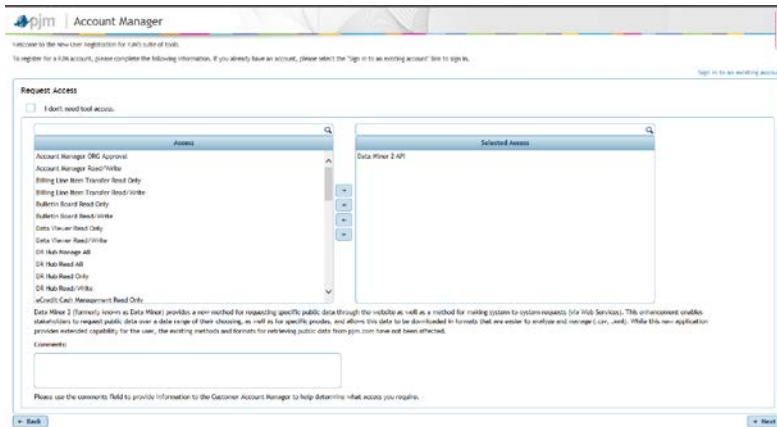
- If the users company account does not exist and the user selects the “if your account is not in the list below...” checkbox and enters their company account name, and select “Next”



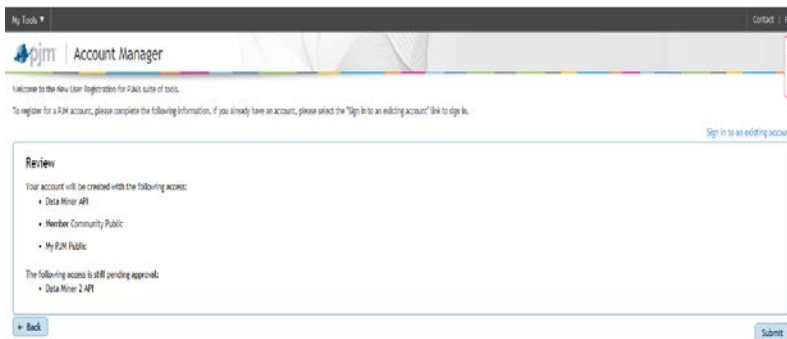
- Select Data Miner 2 API from the list of tools and click “Next” to go to next step.

The right arrow button can be used to move the tool access selection over to the “Selected Access” accumulator section. Left arrow will remove the tool access selection from the “Selected Access” accumulator section.

Double clicking the tool access will also move the selection over to “Selected Access” accumulator section.



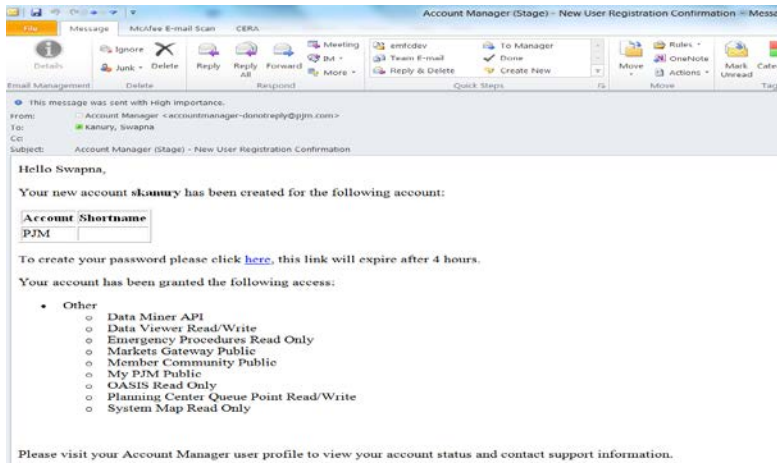
5. You will be directed to a Review Page to review the Tools Access request. This page details the default access the user will receive upon account creation (Data Miner API, My PJM Public, and Member Community Public) and pending access for Data Miner 2 API. e. Keep in mind that the Company CAM must approve the access request before the user can obtain access to the tool. A listing of the Company CAM(s) is also detailed on this page. Click on select the “Submit” button to complete the account registration process, or select the “Back” button to make revisions.



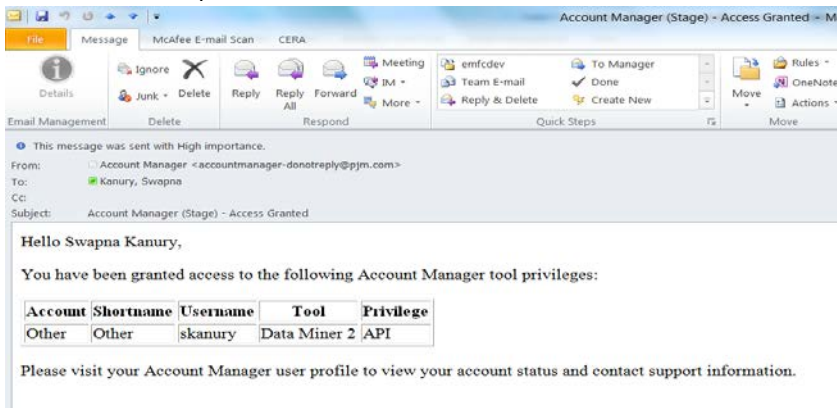
6. You will receive the following message once registration is complete. Please close out of this window and expect an email to set up their password (email will be sent to the address provided during account registration).



7. Upon registration, you will receive an e-mail from PJM Account Manager <accountmanager-donotreply@pjm.com> with content below. Please allow a couple of business days for the e-mail and ensure it does not caught in “SPAM” folder. Below is just an example.

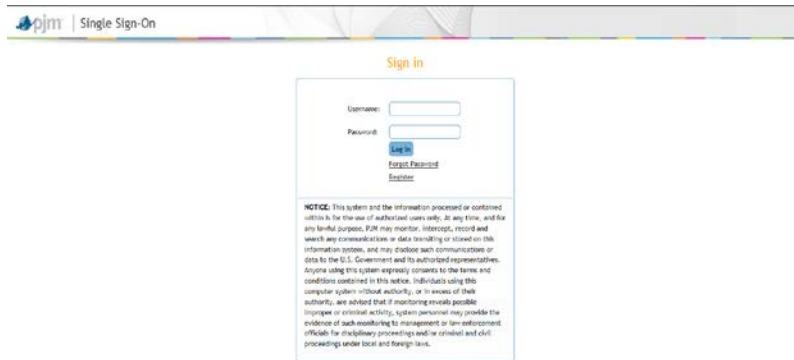


- Click on the link provided in the email to generate a password. Please note that if the user does not create their password within the 4 hour threshold, the user will need to contact their Customer Account Manager (CAM) to request a password reset. The company CAM will also receive an email that will detail the new user and pending access request.
Important: *Please note that the Data Miner API in the email confirmation is different from the Data Miner 2 API. Please follow Step 9 to ensure that the user id registered gets the correct access grants*
- Once you receive the email above, please forward the email to Data Miner 2 Support DataMiner2Support@pjm.com for further provisioning. Please allow 1 to 2 business days for the provisioning to be complete.
- When your user id is subscribed successfully to Data Miner 2, you will receive a confirmation email that looks like the email sample below.

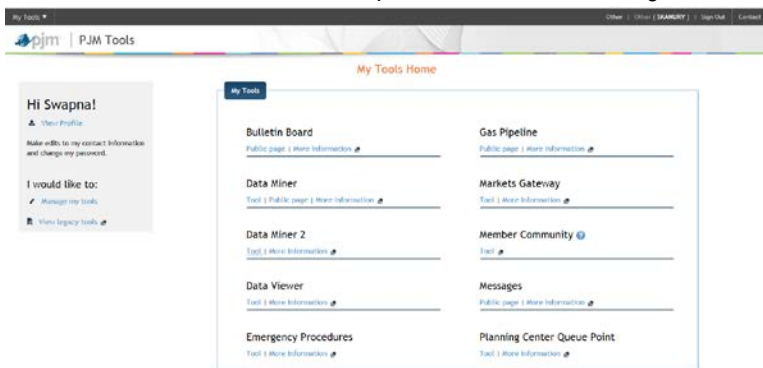


Signing in to Data Miner 2 API

- Once you are setup with a valid PJM Account and password, navigate to <https://apiportal-train.pjm.com/> and click on sign in button. The following screen will show up



2. Enter PJM account username and password and click on Log In to see the following screen



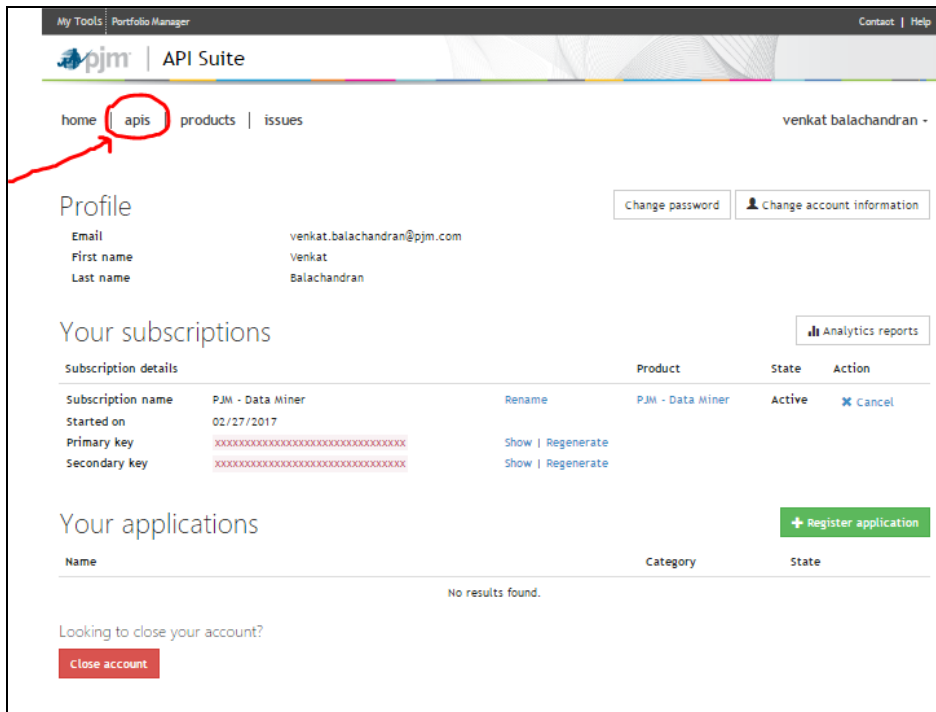
3. Click on "Tool" link under Data Miner 2 to navigate to the API developer portal

User Profile Management

Once a user has an established PJM account in API Developer Portal, the user can manage their profile information. The steps below show the different functions a user can perform on the My Tools Home page, Account Manager User Profile Account Information page, and the Account Manager Account Access page.

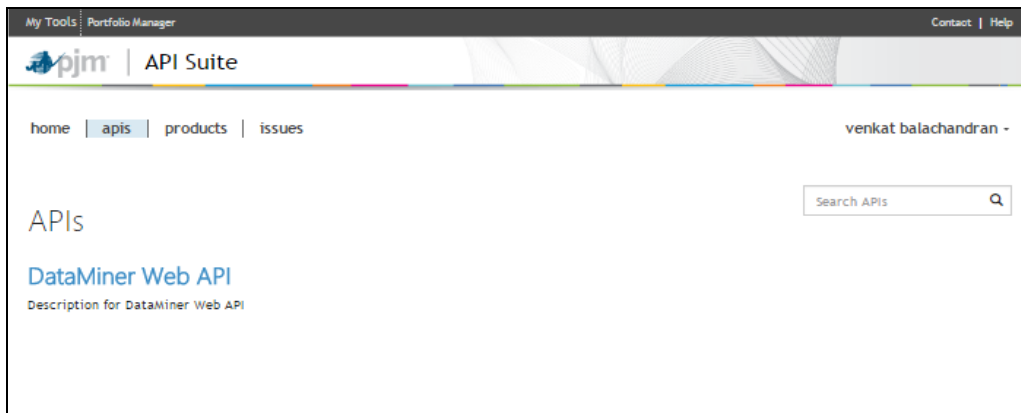
1. When you click on the "profile area" link listed on the e-mail above, it should take you to the screen below. Upon signing in, it will navigate to your profile area.

- Once you are on the profile area as provided in the screenshot below, you will be able to change your account information, change passwords and lookup your token keys etc.

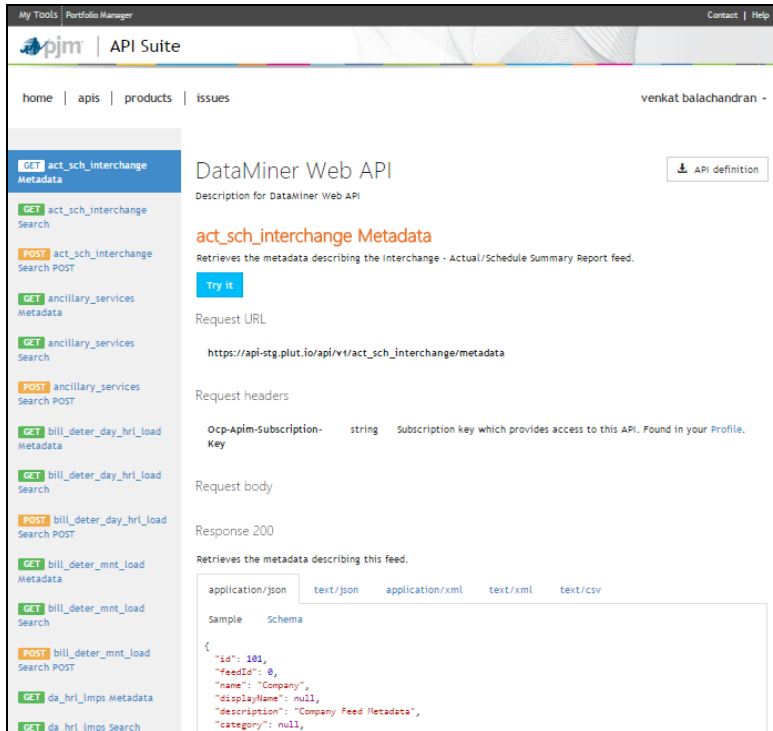


B. Access to API Integration Specification

- When you click on the API link above, it should navigate to list of API available. Please click on the “DataMiner Web API”.

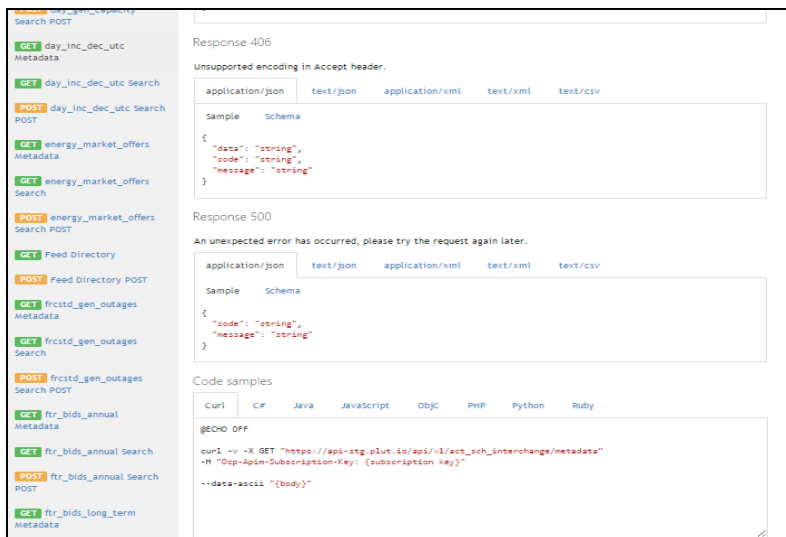


- Clicking on the “DataMiner Web API” should provide the list of topics available, the request URL / headers for the API and the responses received for each published list of API. The API definition is also available in Swagger and WADL formats.



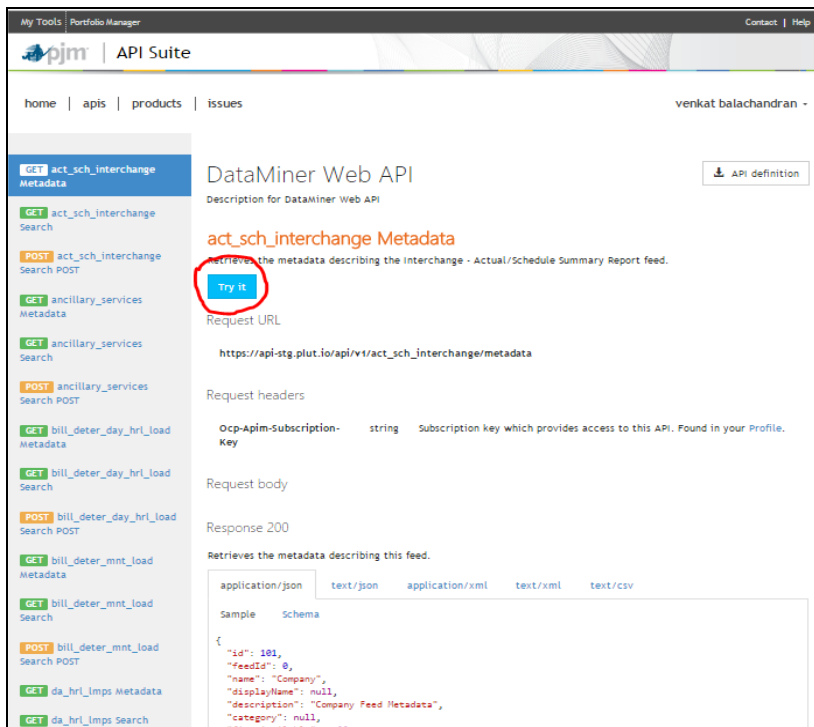
The screenshot shows the 'DataMiner Web API Suite' interface. The left sidebar lists various API endpoints under 'API Suite'. The main content area displays the details for the 'act_sch_interchange Metadata' endpoint. It includes a 'Try it' button, the 'Request URL' (https://api-stg.plut.io/api/v1/act_sch_interchange/metadata), 'Request headers' (Ocp-Apim-Subscription-Key), and a 'Response 200' showing a JSON object with metadata details.

- Scrolling towards bottom of the page, provides the sample code to invoke the API in different languages such as CURL, C#, JAVA, JavaScript, ObjC, PHP, Python and Ruby.

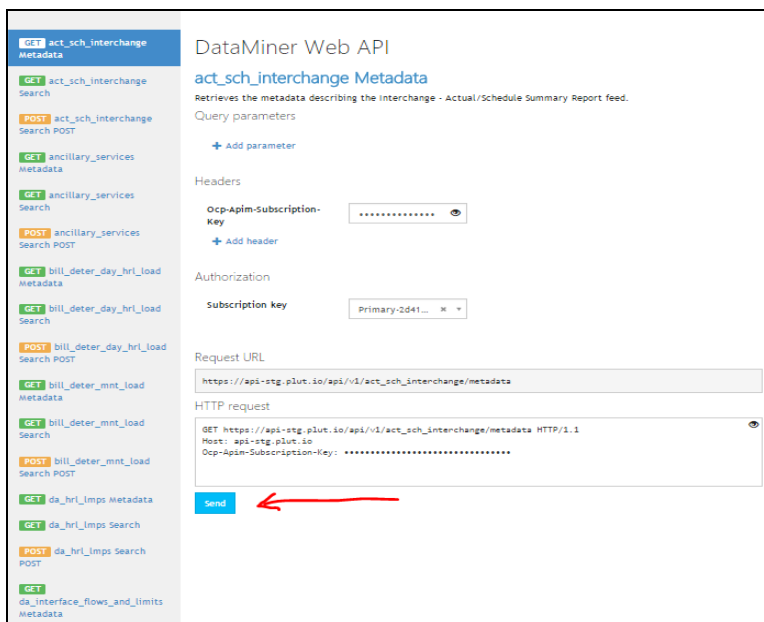


The screenshot shows the 'DataMiner Web API Suite' interface, scrolled down to show the 'day_inc_dec_utc Search POST' endpoint. It displays the 'Response 406' (Unsupported encoding in Accept header) and the 'Response 500' (An unexpected error has occurred, please try the request again later.). Below the responses, there is a 'Code samples' section with tabs for different languages: Curl, C#, Java, JavaScript, ObjC, PHP, Python, and Ruby. The 'Curl' tab is selected, showing a sample curl command to invoke the API.

4. The user can also simply try and test the API call directly from this page by clicking the “Try it” button at the top of the page



- Click on the "Send" button at the bottom of the page as shown below, any parameters (if available) can also be tested right from the page.



III. Revision History Revision Version 00 – Draft (03/22/2017)

Created a new document with user registration and accessing the API Integration Specifications for Data Miner 2 - Beta. The document includes functionality in the API developer portal for New User Registration, User Profile Management, and Access to API Integration Specifications for Data Miner 2 - Beta delivery on 03/31/2017. This is the first release of the PJM Data Miner 2 API Integration Specifications.

Revision Version 01 – Draft (04/07/2017)

Updated the URL for the Beta / Train environment.

Revision Version 02 – Draft (06/02/2017)

Update New User registration and Sign in to reflect PJM Account Sign up

Review Approval

Revision Version	Effective Date	Approver / Title	Department
00	03/22/2017	Venkat Balachandran – Project Manager	Business Intelligence
01	04/07/2017	Venkat Balachandran – Project Manager	Business Intelligence
02	06/02/2017	Swapna Kanury – Sr. Business Analyst	Corporate Data Management