

Harmony ONE Bounty Project Report

PHP Class, API requests for scripting languages, and Harmony Node API Explorer

Bounty Location: <https://talk.harmony.one/t/php-class-api-requests-for-scripting-languages-and-harmony-node-api-explorer/11306>

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First off, I would like to thank the Harmony Team for the funding opportunity. It gives me great pleasure to announce all milestones (except support for the next year) have been met. Also, I know it wasn't part of the bounty, but if Harmony would like to do a short AMA with me, I am willing. Also not part of the bounty, I plan on producing a short video in the future to highlight PHPH1's functionality.

Overview:

PHPH1 is a PHP wrapper class that bridges the Harmony ONE Node API to PHP for use by other languages. A web developer will be able to make requests to the class using scripting languages such as Javascript without having to worry what TYPE of data it is, or how the JSON request to the API server is formatted. The PHPH1 class will return a JSON formatted object (and maybe a few other ways in the future) for the scripting to read and handle. This software is NOT limited to the Harmony API Nodes anymore. You are able to add your own node url, including removing the standard harmony nodes, and set the default url and shard. The class also allows the dev to limit remote client access to the methods by IP address as well as block rowdy clients from using the interface.

Not only this but PHPH1 is a learning tool for developers just getting started with the Harmony v2 Node API. It includes documentation for every method as well as allows you to run test data to see how each method reacts and how the JSON requests are formed.

Beyond this, there is also a PHPH1 Minimal package that has a stripped down PHPH1 PHP class optimized to be included in any PHP project. This class is extremely simple to include and use and there is documentation and a simple example in the package.

Links:

Home Page: <https://php1.app>

PHPH1 Explorer Docs: <https://php1.app/doc>

PHPH1 Explorer Github Page: <https://github.com/ILL-DIE-TRYING/php1>

PHPH1-MIN Docs: <https://php1.app/doc-min>

PHPH1-MIN Github Page: https://github.com/ILL-DIE-TRYING/php1_min

Deliverables:

1. **Create a PHP class with every API call in it.**

COMPLETE and I believe I found one or two methods not documented in the Postman docs

2. **Optimize and modernize the class code reassess the PHP code logic and revamp if necessary.**

COMPLETE

3. **Create a MOBILE FRIENDLY Harmony API explorer into the package to assist developers in learning how the API works.**

COMPLETE and works well! The API documentation is most likely the most complete documentation for the Harmony Node v2 API on the planet. I went to great lengths to ensure the API output and documentation match exactly.

- 4. Create documentation on the “homepage” of the explorer package including configuration and simple Javascript/jQuery code examples. This also includes how to extend the network and shards in order to do things like run a local node and get data from it.**

COMPLETE.. Not only this but every method page returns TWO code examples to make API requests for that method using the data the user input. One code example is to query the Harmony node directly with Javascript, the other is to query the PHPH1 call script using Javascript

- 5. Create documentation for the class and explorer using PHP DOC.**

COMPLETE.. There are two sets of documentation created. One for the explorer package and one for the minimal PHP class package

Explorer docs: <https://phph1.app/doc/classes/phph1.html>

Minimal Class docs: <https://phph1.app/doc-min/classes/phph1.html>

- 6. Create a package where a developer could drop the package into a directory and safely use it for retrieving data using other scripting languages with minimal input. I plan to provide 3 different download packages: Full with full API explorer, minimal with just the class and remote call script, and class only. As long as I have my stuff properly set up on github, this should be pretty easy.**

COMPLETE.. I only felt the need to create two packages. The full explorer package and a minimal PHP class package.

- 7. Report API methods that do not react according to the API documentation (this happens as I work throughout entire project as basically an include. As far as time to report and deal with it depends on how fast the line of communication is).**

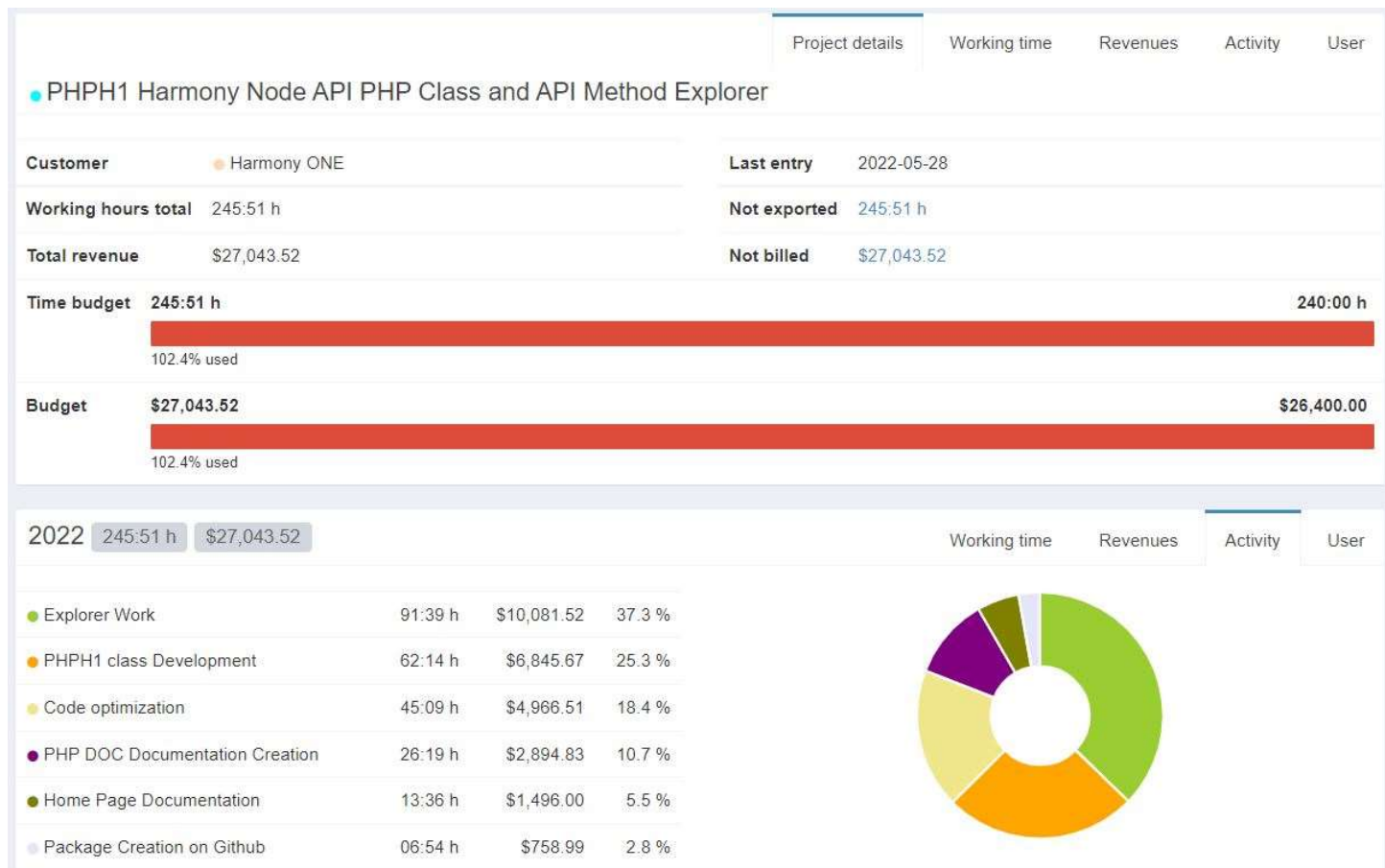
*I have attempted to do this with no response from Harmony. Whomever manages the API documentation should **really** compare their docs to the method documentation in PHPH1 (<https://phph1.app>). The official Harmony Postman docs are incomplete and innacurate.*

- 8. Maintain the class and project if/when the API changes/expands (depends on how often the API changes, just part of maintenance).**

Ready and willing.. There were no hours attached to this but I am fully planning on maintaining my hard work for AT LEAST 2 years (I just bought a domain and SSL for two years to show I plan on going long on this one)

- 9. Maintain any bug reports etc on Github.**

Definitely will happen.. I'm locked in, have a TON of time into this and have purchased the phph1.app domain for a two year period to start



Timesheet:

Date	Description	Hours
2022-05-28	Github updates to both the full package and the MIN class package. Created releases for both. Adjusted the README Activity: Package Creation on Github Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:04 h
2022-05-27	Tweaks to docs and docblocks, updated docblocks with new links to new URL, someUI tweaks and small bug fixes in the PHPH1 class Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:31 h
2022-05-26	Finished up the home page documentation for the minimal package. Created the minimal package repository on Github. Started the Github readme documentation file. Fixed a few things found in the PHPH1 class while converting the explorer version to the minimal version. Worked up sample code for the minimal package Activity: Home Page Documentation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:43 h
Total duration		245:51 h

Date	Description	Hours
2022-05-25	Fixed an issue with boolean detection in the explorer, Created the minimal PHPH1 class and front page documentation with code examples, just a little bit to go. Worked on the minimal package with a couple simple examples. Still have to run PHPDoc on the minimal package for its own documentation. Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:00 h
2022-05-24	Added javascript code examples in the explorer output for using the Harmony API node directly..Boolean values weren't being validated properly. Had to revamp how they are managed from the inputs. All is well again. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	07:26 h
2022-05-23	Output page has been adjusted. It now also shows a sample javascript code using POST dynamically for every method. Also added code highlighting to the page and the ability to copy the output blocks. All styles in output has been placed in CSS now. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	07:04 h
2022-05-15	Still working on bringing a POST code example to the explorer. I have the javascript example page created and working properly. Looking for an elegant solution Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:26 h
2022-05-14	Creating javascript code for post requests using the new post setup. adjusted error system to report errors in json for rpc requests. orking onexpanding the output data to include code for javascript post requests. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:44 h
2022-05-13	After evaluating my code I decided the system needed the ability to accept requests using POST data. It wasn't a huge security issue but using POST data kept the data sent through forms from being logged in the server logs and saved in the browser history. I am currently in the midst of addingPOST data capabilities system-wide. Also started creating new javascript example using POST data. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	06:08 h
2022-05-11	finished the method updates with the new input function that accepts GET or POST data now and the explorer uses POST by default now. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:15 h

Total duration

245:51 h

Date	Description	Hours
2022-05-10	<p>After looking through things and checking I decided that using GET requests aren't necessarily a security risk network-wise but the GET data stays in your browsing history and is logged by the webserver. So I decided to change the Explorer over to using POST instead and the remote api can use POST or GET requests now. Every method needs the new way of doing things. While at it I also changed how the method pages go through the submitted data. it uses an array for each form input that includes what type of data it should be (integer, Boolean, or string). I am about half done with the methods adjustment now and will need to iterate through to ensure everything is working as prescribed.</p> <p>Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	04:25 h
2022-05-09	<p>I decided that GET data in the browser wasn't a great idea. I analyzed and figure out a way to use either POST or GET data which allows me to go back and adjust all method forms so they don't send requests in the browser address. This wouldn't be such a big deal but the GET data gets stored in the server logs along with wallet addresses as well as in browsing history with wallet addresses. I don't like that. I'll start in on the methods tomorrow. Also updated to Github and adjusted some Github documentation.</p> <p>Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	06:10 h
2022-05-07	<p>Did research and found what R S and V were. Went back and fixed all methods that had that in their output. Validating doc work. Working on plans to change how the black and whitelist work so nothing at all loads when they are set.</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	04:07 h
2022-05-06	<p>Continuing on with explorer details.. finished the docs. There is still a few FIXMES.. I don't know what "r" "v" and "s" represent.. Maybe receiver, sender, and value?</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	03:22 h
2022-05-05	<p>Continuing on ironing out details in method documentation. Left off at hmyv2_getDelegationsByValidator</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:05 h
2022-05-05	<p>Iterating through the methods and tying up loose ends</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	04:05 h
2022-05-03	<p>Added hmyv2_sendRawStakingTransaction and hmyv2_sendRawTransaction despite no help from harmony so far. Will just validate for hex characters for now and worry about possibility of length, formatting later. Verified all available methods are written including one not in the harmony docs. I believe there may be a few more if I spent the time to dig into eth2 specs. I need to know more about the raw transactions hex string. Added phph1_reset so a person can write multiple methods into a single page using a single class handle. Created a validation method for transaction index, wrote some doc block stuff for newly added methods.</p> <p>Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	05:52 h
Total duration		245:51 h

Date	Description	Hours
2022-05-01	Created a (I think) nice logo for PHPH1. Did some UI work as well as some more mobile testing. Just in case somebody wants to know I test mobile with the "Responsive Viewer" plugin for chrome and it allows me to see what the site looks like on mobile on several different phone models. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:27 h
2022-04-30	Updated the readme on Github. Almost got it just like the PHPH1 front page documentation Activity: Package Creation on Github Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:10 h
2022-04-28	Synch dev to live and upload latest to Github. Generated the latest alpha package for pre-release Activity: Package Creation on Github Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:40 h
2022-04-28	Continuing on with home page documentation. Activity: Home Page Documentation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	05:00 h
2022-04-28	Worked on formatting and the start of the homepage documentation. Tested the first alpha release packages to ensure my directions matched what actually happens. To test I set up PHPH1 in a newly created SSL vhost. I also tested it in a random subdirectory of the vhost to ensure PHPH1 is very portable. Activity: Home Page Documentation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:53 h
2022-04-26	Worked out some issues with page number. It seems the -1 option shown in the API docs does not work with the nodes. Did some work on Github README as well and created a test package in order to align front page docs with the process of extracting and putting the files on a webserver. Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:28 h
2022-04-25	Added a way to block ip addresses, also added a way to allow only specific ip addresses. Also added a way to turn on and off the ability to use -1 in any requests that have that option. I still have to write the code into the phph1 class functions for the added option. Enhanced the debug data that is shown when debugging is turned on. Also cleaned some code from all the methods. Removed the debug warning lines to clean up the method files and added it in inc/index_body.php and inc/errors.php Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	07:14 h
2022-04-19	Still more doc blocks for the class additions. Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:46 h
2022-04-18	Iterating through the PHPH1 class and writing doc blocks for new code. Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:27 h
Total duration		245:51 h

Date	Description	Hours
2022-04-18	Finished code revamp of all methods available in PHPH1 Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:00 h
2022-04-16	Continuing on with updating methods with revamped code. Ended on hmyv2_getStakingNetworkInfo Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:02 h
2022-04-15	Continuing on with updating methods with revamped code. Finished with hmyv2_getBlockSigners Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:33 h
2022-04-14	Moving on with optimizing methods Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:12 h
2022-04-06	Continuing on with code revamp. Currently all class variables are private and there has been several functions added to work with the variables. Many adjustments required for the methods. Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:32 h
2022-04-05	Still working on the revamped class logic, some css cleanup, menu adjustment, worked on the debugging output Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:16 h
2022-04-04	Adjusting the class to fit newly refactored logic. Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	07:32 h
2022-04-03	Cleaning up the boot processes and writing simple functions to get and set private values. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:35 h
2022-04-03	When making calls with methods that return large amounts of data, using json_decode to convert the JSON string to an array used a LOT of memory and even crashed my server once. After doing research, I found the JSON data uses very little memory. I changed everything so there is no conversion to an array in PHP saving tons of memory usage. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:38 h
2022-04-02	Continuing on internalizing everything I can and generating good data array Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:14 h
2022-03-30	Continuing on with the restructure. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	05:09 h
Total duration		245:51 h

Date	Description	Hours
2022-03-29	More logic restructuring. Pretty much every single call needs to be altered. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:38 h
2022-03-29	Continuing on with restructuring the logic Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:52 h
2022-03-28	my validation implementation was kind of clunky and too difficult for developers. Altering functions and validation setup to make things cleaner and more straight forward. Also adding htmlentities to all input in order to ensure no code injections can be made. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:12 h
2022-03-28	Working on better logic and safer execution. Activity: Code optimization Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	05:53 h
2022-03-27	Menu adjustments, top button adjustment, some work on the mobile CSS, fixing method pages for consistency, more UI/UX work. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	06:17 h
2022-03-26	Back to writing doc blocks. Almost done! All basic info is in there and now I will need to go back and ensure I have all the details I can fix. Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:05 h
2022-03-26	Finished adding description to methods. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:45 h
2022-03-24	More adding descriptions to method pages Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	04:24 h
2022-03-24	Continuing on adding description to method pages Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:34 h
2022-03-24	Adding a description to the method pages Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:52 h
2022-03-23	Spent time debugging hmyv2_call. Parameters in Node API docs were way off. All numbers for this call are in hex. Found information for _call and _getStorageAt and _estimateGas and enabled them. We are at 60 of 63 API Calls now. Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:32 h
Total duration		245:51 h

Date	Description	Hours
2022-03-23	More docblocks in phph1 class Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:01 h
2022-03-22	Cleaning up comments, added method hmyv2_getDelegationsByDelegatorByBlockNumber Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:50 h
2022-03-22	Back in with doc blocks. Ran into a problem with the phpdoc template I was using and had to revert to figuring out how to fix that so it worked like I expect when generating docs. Lost a day of work over this. Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:26 h
2022-03-20	More doc blocks Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:56 h
2022-03-20	Continuing on writing doc blocks for documentation Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	02:01 h
2022-03-19	More writing doc blocks in the phph1 class Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	00:59 h
2022-03-19	More documentation work in phph1.php class Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:37 h
2022-03-19	More work on the doc blocks Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:28 h
2022-03-19	Starting to write in the doc blocks for the PHP Documentor Activity: PHP DOC Documentation Creation Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	03:02 h
2022-03-17	Continuing on with explorer work. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:59 h
2022-03-16	Still working on this round of ensuring consistency. finished up to and including hmyv2_getValidatorInformation. Got stuck on this and had to spend some real time fixing the API documentation. Added to the API accuracy report for Harmony amongst others. Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	05:35 h
Total duration		245:51 h

Date	Description	Hours
2022-03-12	<p>Worked on explorer again. Cleaning up method pages for consistency in punctuation and such. About 2/3 done with this iteration.</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	02:33 h
2022-03-12	<p>Continuing with explorer work again</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	04:41 h
2022-03-11	<p>Continuing on with explore page cleanup</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	02:12 h
2022-03-10	<p>integrating footer system-wide, created dynamic, floating back to top button. Adjusted CSS for more consistency throughout the interface. More method explorer page cleanup. About half done with them for this iteration through.</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	05:11 h
2022-03-08	<p>Cleaning up method Explorer pages</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	02:44 h
2022-03-08	<p>Some class cleanup in order to prepare to move towards the class testing phase of things. I still have a few methods to add that are being trouble methods for me atm.</p> <p>Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	02:13 h
2022-03-08	<p>Added Explorer Pages:</p> <p>net_peercount hmyv2_getBlockSignerKeys hmyv2_getHeaderByNumber hmyv2_getLatestChainHeaders hmyv2_getStakingTransactionsCount hmyv2_getStakingTransactionsHistory</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:53 h
2022-03-08	<p>added functions:</p> <p>net_peercount hmyv2_getBlockSignerKeys hmyv2_getHeaderByNumber hmyv2_getLatestChainHeaders hmyv2_getStakingTransactionsCount hmyv2_getStakingTransactionsHistory</p> <p>Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:22 h
Total duration		245:51 h

Date	Description	Hours
2022-03-07	<p>Added Explorer Pages:</p> <p>hmyv2_getLeader</p> <p>hmyv2_getShardingStructure</p> <p>hmyv2_getValidatorKeys</p> <p>hmyv2_getCurrentBadBlocks</p> <p>hmyv2_getNodeMetadata</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:58 h
2022-03-07	<p>Added Methods:</p> <p>hmyv2_getLeader</p> <p>hmyv2_getShardingStructure</p> <p>hmyv2_getValidatorKeys</p> <p>hmyv2_getCurrentBadBlocks</p> <p>hmyv2_getNodeMetadata</p> <p>Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:50 h
2022-03-07	<p>Added method explorer pages:</p> <p>getCode</p> <p>getStorageAt</p> <p>getPoolStats</p> <p>pendingStakingTransactions</p> <p>getStakingTransactionByBlockNumberAndIndex</p> <p>getStakingTransactionByBlockHashAndIndex</p> <p>getLastCrossLinks</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:31 h
2022-03-07	<p>Added some methods:</p> <p>getCode</p> <p>getStorageAt</p> <p>getPoolStats</p> <p>pendingStakingTransactions</p> <p>getStakingTransactionByBlockNumberAndIndex</p> <p>getStakingTransactionByBlockHashAndIndex</p> <p>getLastCrossLinks</p> <p>Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	02:24 h
2022-03-05	<p>Worked on hmyv2_estimateGas and hmyv2_getCode. I am starting to think the Harmony API documentation for this series of methods is flawed somehow. It seems the input doesn't align with the method. Still have to do some checking.</p> <p>Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	01:11 h
2022-03-05	<p>Created explorer page for hmyv2_call</p> <p>Activity: Explorer Work Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE</p>	00:54 h
Total duration		245:51 h

Date	Description	Hours
2022-03-05	Added hmv2_call and val_call to the class and explorer Activity: PHPH1 class Development Project: PHPH1 Harmony Node API PHP Class and API Method Explorer Customer: Harmony ONE	01:01 h
Total duration		245:51 h