Pony Mail! Login -Viewing email #b236d320671e2ba06d0aa7863313a232e3aa2f3f... (and replies): Click to view as flat thread, sort by date View Source Permalink Reply From: Hyunsik Choi <h...@apache.org> To: "d...@tajo.apache.org" <d...@tajo.apache.org> **Subject:** [DISCUSSION] Portable remote client APIs Date: 2015/03/12 09:32:47 **List:** dev@tajo.apache.org Hi folks, Recently, there are three trials to add new remote client APIs. \* C/C++ Client over Thrift - https://issues.apache.org/jira/browse/TAJ0-1264 \* Add REST Client API - https://issues.apache.org/jira/browse/TAJ0-1331 \* Tajo Python Native Client - https://issues.apache.org/jira/browse/TAJ0-1367 In some aspect, I'm very happy to discuss such an issue. I haven't expected that we are discuss and vote for duplicated efforts. BTW, it would be great if we do not spend our resource on duplicated works. In order to rearrange this duplicated works, we need some discussion about their pros and cons. I hope that we consent our direction after this discussion. Otherwise, we can call for a vote for the approach. Best regards, Hyunsik ✓ View Source Permalink Reply **From:** Hyunsik Choi <h...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/12 09:35:50 List: dev@tajo.apache.org Here is my suggestion. I prefer REST API. I think that it would be better than other due to the following reasons: \* No dependency - most of script languages do not need any dependency for this approach. Also, C and C++ just needs json library for this approach. Please look at JSON for Modern C++ (https://github.com/nlohmann/json). It just requires to include one header and one source file. As a result, there is no dependency problem. \* Portability - most of script languages basically support REST and JSON. They don't need client implementation. They can just use REST and JSON features in order to access Tajo. If necessary, we can make easily some helper libraries for other languages. \* Secure - It is easy to provide the secure channel and authentication method too. Basically, many HTTP API provides HTTP over SSL. Jihoon Kang already started REST API work. If others start to develop clients for other languages like C/C++ client over REST API after his work, it would be best for us. Best regards, Hyunsik View Source Permalink Reply **From:** Jihoon Son <j...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/12 09:38:43 **List:** dev@tajo.apache.org +1 for Hyunsik's suggestion. I totally agree with you. Warm regards, Jihoon 2015년 3월 12일 (목) 오후 5:35, Hyunsik Choi <hy...@apache.org>님이 작성: From: CharSyam <c...@gmail.com> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/12 09:56:25 **List:** dev@tajo.apache.org +1 I also agree with hyunsik's suggesttion. I think it is better to make language binding to use Rest API. It will be more efficient and less effort :) 2015-03-12 17:38 GMT+09:00 Jihoon Son <ji...@apache.org>: "··· ▼ View Source Permalink Reply **From:** Jinho Kim <j...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/12 11:40:55 **List:** dev@tajo.apache.org +1 RESTful API for code maintenance -Jinho Best regards 2015-03-12 17:56 GMT+09:00 CharSyam <ch...@gmail.com>: ✓ View Source Permalink Reply **From:** Jaehwa Jung <b...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/12 12:18:26 **List:** dev@tajo.apache.org Hi guys +1 for Hyunsik's suggestion. REST API may be more efficient for code maintenance and various clients implementation. Cheers Jaehwa +1 RESTful API for code maintenance -Jinho Best regards 2015-03-12 17:56 GMT+09:00 CharSyam <ch...@gmail.com>: after ✓ View Source Permalink Reply From: Jihun Kang <y...@gmail.com> Subject: Re: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/12 14:38:45 List: dev@tajo.apache.org Hello All, I would give +1 to REST API Implementation. Even Protobuf and Thrift give flexibility and extensibility to programmers, but entry barriers for these frameworks are extremely high. Also, if we want to make another client implementation for other programming languages, we need to figure out that these framework have code generator feature for that programming language. 2015-03-12 20:18 GMT+09:00 Jaehwa Jung <bl...@apache.org>: From: Hyoungjun Kim <b...@gmail.com> **Subject:** Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/12 15:56:05 **List:** dev@tajo.apache.org Hi all, I give +1 to REST API. I think REST is more common. Warm regards, Hyoungjun 2015. 3. 12. 오후 10:41에 "Jihun Kang" <yk...@gmail.com>님이 작성: View Source Permalink Reply From: Hyunsik Choi <h...@apache.org> **Subject:** Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 00:34:14 List: dev@tajo.apache.org We seem to get a consent to use REST API. I'll wait for one more day, and then we can decide this issue. Best regards, Hyunsik ✓ View Source Permalink Reply **From:** Dongjoon Hyun <d...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 00:40:38 **List:** dev@tajo.apache.org I give +1 to REST API, too. Best regards, Dongjoon. From: 정유선 <j...@sk.com> Subject: RE: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 05:33:54 **List:** dev@tajo.apache.org I suggest another option. What do you think about two options for remote interface? Thrift is the faster and more lightweight than REST. Please refer this article. - http://blog.cloudera.com/blog/2013/03/how-to-use-the-apache-hbase-rest-interface-part-1/ It describes various ways to access and interact with HBase. Both of them, giving developers a wide choice of languages and programs to use. Best regards, Yousun Jeong. ----Original Message----From: Hyunsik Choi [mailto:hyunsik@apache.org] Sent: Friday, March 13, 2015 8:34 AM To: dev@tajo.apache.org Subject: Re: [DISCUSSION] Portable remote client APIs We seem to get a consent to use REST API. I'll wait for one more day, and then we can decide this issue. Best regards, Hyunsik **From:** Ethan <c...@gmail.com> Subject: RE: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 05:53:47 **List:** dev@tajo.apache.org Hey folks, Any one will be attending ApacheCon at Austin TX next month? Thanks, Ethan I suggest another option. What do you think about two options for remote interface? Thrift is the faster and more lightweight than REST. Please refer this article. - http://blog.cloudera.com/blog/2013/03/how-to-use-the-apache-hbase-rest-interface-part-1/ It describes various ways to access and interact with HBase. Both of them, giving developers a wide choice of languages and programs to use. Best regards, Yousun Jeong. ----Original Message----From: Hyunsik Choi [mailto:hyunsik@apache.org] Sent: Friday, March 13, 2015 8:34 AM To: dev@tajo.apache.org Subject: Re: [DISCUSSION] Portable remote client APIs We seem to get a consent to use REST API. I'll wait for one more day, and then we can decide this issue. Best regards, Hyunsik On Thu, Mar 12, 2015 at 7:56 AM, Hyoungjun Kim <ba...@gmail.com> wrote: From: 최승운 <s...@sk.com> Subject: RE: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 06:01:29 **List:** dev@tajo.apache.org I give +1 to maintain both rest and thrift. Best regards, Seungun. 보낸 사람: 정유선 <je...@sk.com> 보낸 날짜: 2015년 3월 13일 금요일 오후 1:33 받는 사람: dev@tajo.apache.org 제목: RE: [DISCUSSION] Portable remote client APIs I suggest another option. What do you think about two options for remote interface? Thrift is the faster and more lightweight than REST. Please refer this article. - http://blog.cloudera.com/blog/2013/03/how-to-use-the-apache-hbase-rest-interface-part-1/ It describes various ways to access and interact with HBase. Both of them, giving developers a wide choice of languages and programs to use. Best regards, Yousun Jeong. ----Original Message----From: Hyunsik Choi [mailto:hyunsik@apache.org] Sent: Friday, March 13, 2015 8:34 AM To: dev@tajo.apache.org Subject: Re: [DISCUSSION] Portable remote client APIs We seem to get a consent to use REST API. I'll wait for one more day, and then we can decide this issue. Best regards, Hyunsik View Source | Permalink | Reply **From:** Jihoon Son <j...@apache.org> **Subject:** Re: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/13 06:28:39 **List:** dev@tajo.apache.org Jerryjung, thanks for your suggestion. As you said, Thrift will be faster and more lightweight than REST. However, most native protocols are faster than REST. So, this cannot be a reason for using Thrift. Alternatively, maintaining various types of protocols can be an option. However, this will cause much greater maintenance cost. Even though the link which you gave above is not for comparing the performance Thrift and REST protocols, there is a paragraph as follows. There are two main approaches for doing that: One is the Thrift interface As indicated here, REST can be a good candidate to support various languages and programs. In addition, I think that the performance of Client APIs does not matter because it's contribution to the entire query performance is very little. Welcome any arguments. Sincerely, Jihoon View Source Permalink Reply **From:** Jihoon Son <j...@apache.org> **Subject:** Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 06:32:23 **List:** dev@tajo.apache.org I missed one thing. It is not true that we will not provide the Thrift interface. We will provide the Thrift interface using REST. Sincerely, Jihoon View Source Permalink Reply **From:** Jihoon Son <j...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 06:38:15 **List:** dev@tajo.apache.org Sorry, it was my misunderstanding. We still have no plan to support Thrift interface. Sincerely, Jihoon **From:** Hyunsik Choi <h...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/13 06:58:41 **List:** dev@tajo.apache.org Hi Jerry, How much faster and lightweight than REST? Luckily, Thrift may be faster 1~2 msec than REST per call. But, note that Tajo is an analytical system. The target response times of Tajo are usually from few seconds to hours. So, the speed which come from wired protocol is much trivial to the purpose of our client APIs. The link you introduce is about Hbase. As you know, Hbase is OLTP-like system. It processes thousands of transactions per seconds. So, the speed and lightweight are important to them. But, Tajo is not. As I mentioned, REST API is very portable and has no dependencies in many languages. I think that these are the most important factors of our client APIs. Best regards, Hyunsik ✓ View Source Permalink Reply From: 정유선(JUNG YOUSUN) <j...@sk.com> **Subject:** RE: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/13 07:28:06 **List:** dev@tajo.apache.org Yep! I just think both can support multiple language client. As you mentioned, it is not critical issues about performance in Thrift. Anyway, I think it's a good discussion about the remote interface on Tajo. :) Sincerely, Yousun Jeong ----Original Message----From: Hyunsik Choi [mailto:hyunsik@apache.org] Sent: Friday, March 13, 2015 2:59 PM To: dev@tajo.apache.org Subject: Re: [DISCUSSION] Portable remote client APIs Hi Jerry, How much faster and lightweight than REST? Luckily, Thrift may be faster 1~2 msec than REST per call. But, note that Tajo is an analytical system. The target response times of Tajo are usually from few seconds to hours. So, the speed which come from wired protocol is much trivial to the purpose of our client APIs. The link you introduce is about Hbase. As you know, Hbase is OLTP-like system. It processes thousands of transactions per seconds. So, the speed and lightweight are important to them. But, Tajo is not. As I mentioned, REST API is very portable and has no dependencies in many languages. I think that these are the most important factors of our client APIs. Best regards, Hyunsik View Source Permalink Reply **From:** Jaehwa Jung <b...@apache.org> **Subject:** Re: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/13 07:36:44 **List:** dev@tajo.apache.org This discussion started to avoid duplicated efforts. IMPOV, if we choice both of REST and Thrift, it may be complex to maintain Tajo codes. 2015-03-13 15:28 GMT+09:00 정유선(JUNG YOUSUN) <je...@sk.com>: "··· ✓ View Source Permalink Reply From: Hyunsik Choi <h...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/17 06:32:28 **List:** dev@tajo.apache.org According to the vote results, let's focus on REST for remote API. Best regards, Hyunsik View Source Permalink Reply From: CharSyam <c...@gmail.com> **Subject:** Re: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/17 06:59:38 **List:** dev@tajo.apache.org Yes :) But I think we need good docs for REST api also for client developers. 2015-03-17 14:32 GMT+09:00 Hyunsik Choi <hy...@apache.org>: **"…**" **From:** Hyunsik Choi <h...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/17 07:13:06 **List:** dev@tajo.apache.org Hi CharSyam, Thank you for suggestion. Yes, the REST api will be updated. Please see the attach file at https://issues.apache.org/jira/browse/TAJ0-1331. Jihun already wrote the first draft of REST API. Best regards, Hyunsik "···, View Source Permalink Reply **From:** Jihun Kang <y...@gmail.com> Subject: Re: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/20 05:25:30 **List:** dev@tajo.apache.org Hello All, TAJO REST API design page was created in TAJO wiki page. Please feel free to give any comments on this design. You can find details in following link. https://cwiki.apache.org/confluence/display/TAJ0/TAJ0+REST+API 2015-03-17 15:13 GMT+09:00 Hyunsik Choi <hy...@apache.org>: **"…**" ► View Source Permalink Reply From: Dongjoon Hyun <d...@apache.org> Subject: Re: [DISCUSSION] Portable remote client APIs **Date:** 2015/03/20 05:37:58 List: dev@tajo.apache.org Great! I have two questions. (I'm sure you think about these already.) 1. What about supporting https together? 2. What about supporting optional password in Request Message for supporting future-proof? "userName": "tajo-user", "userPassword": "password", "databaseName": "default" Warmly, Dongjoon. "··· ▼ View Source Permalink Reply From: Jihun Kang <y...@gmail.com> Subject: Re: [DISCUSSION] Portable remote client APIs Date: 2015/03/20 06:30:16 List: dev@tajo.apache.org First of all, I am considering to support https scheme in REST api. However, implementing REST API task was pretty much bigger than expected, so I decided to separate these two HTTP and HTTPS scheme support. HTTPS support will be uploaded in near future, when TAJO-1338 task is finished. Later one looks like implementing authentication on REST API, doesn't it? I also considering about HTTP basic auth using HTTPS and token based authentication. I did not decide yet, and selecting authentication method would be affected by future implementation in security module. 2015-03-20 13:37 GMT+09:00 Dongjoon Hyun <do...@apache.org>: "···,