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Universitas Bandar Lampung
20 - 21, June 2012
Lampung, Indonesia

PREFACE

The activities of the International Conference is in line and very appropriate with the vision and mission of the UBL to promote training and education as well as research in these areas.

On behave of the First International Conference of Engineering and Technology Development (ICETD 2012) organizing committee; we are very pleased with the very good responses especially from the keynote speakers and from the participants. It is noteworthy to point out that about 45 technical papers were received for this conference

The participants of conference come from many well known universities, among others: Universitas Bandar Lampung, International Islamic University Malaysia, University Malaysia Trengganu, Nanyang Technological University, Curtin University of Technology Australia, University Putra Malaysia, Jamal Mohamed College India, ITB, Mercu Buana University, National University Malaysia, Surya Institute Jakarta, Diponogoro University, Unila, Universitas Malahayati, University Pelita Harapan, STIMIK Kristen Newmann, BPPT Lampung, Nurtanio University Bandung, STIMIK Tarakanita, University Sultan Ageng Tirtayasa, and Pelita Bangsa.

I would like to express my deepest gratitude to the International Advisory Board members, sponsors and also welcome to all keynote speakers and all participants. I am also grateful to all organizing committee and all of the reviewers which contribute to the high standard of the conference. Also I would like to express my deepest gratitude to the Rector which give us endless support to these activities, such that the conference can be administrated on time.

Bandar Lampung, 20 Juni 2012

Mustofa Usman, Ph.D
ICETD Chairman

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Web-Based Service Optimization with JSON-RPC Platform in Java and PHP

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Abstract-**Web based application has been used by many organizations to support their business activities within the organization. Sometimes, that application requires the availability of information from other parties outside the organization. Other than that, there is a need to exchange information between applications in a particular organization with applications in other organizations. The applications may be on the different systems and platforms. There is a technology that can be used, commonly known as a web service. JSON-RPC is an alternative to build a web service. This technology involvestwoapplications that are connected via a data connection. During the connection, an application can executes a remote procedure from web service provider to do implementation web service using JSON-RPC technology, with PHP platform for client side application and java platform for server side application.**

Keywords:**Web service, JSON-RPC, PHP, java**

I. INTRODUCTION

At present the need for web-based applications become a major requirement for many organizations to support all business activities in the organization. Sometimes an application requires the availability of information from other parties outside the organization, then the information is used as data for further processing. In addition, there is a need to exchange information between applications in a particular organization with applications in other organizations, which are likely to be on different systems with different platforms. That is why we need a technology that enables cross-platform communication via the web.
One technology that can be used is a web-based service technology or commonly known as a web service. This technology allows for cross-platform communication. Web-based services are used as a service provider in the form of information to other applications, so that between different applications can interact and communicate through the functions provided by an application service provider. This technology facilitates multiple applications to interact with other applications within an organization and outside organization using standards that are not tied to any platform and are not tied to the issue of what programming language used by each application, so that applications can access a sub-routine in Other applications, such as the applicationis currently accessing the sub-routine in the localsystem.

RPC is a simple protocol that can be used to build a web-based services. RPC allows an application to call to the sub-routine provided by other applications residing on different systems. RPC uses a specific data exchange formats like XML or JSON as a communication liaison between systems. RPC protocol with JSON format as a data exchange format called JSON-RPC. This research will implement a web-based services with JSON-RPC for PHP platform using the Java platform client application and server application service provider.

II. WEB SERVICE

Web-based servicesis a technology thataims tofacilitatecommunication betweenapplications, whichuse a standardplatformthatnot boundandnot boundbythe programming language usedby eachapplication. W3Cdefinition(2011)"A softwaresystemdesignedtosupportinteroperablemachine-to-machine interactionoveranetwork. It has aninterfacedescribedinamachine-processableformat(specifically WSDLWeb ServicesDescriptionLanguage). OtherInteractwiththe systemsthewebserviceinamannerprescribedbyitsdescriptionusingSOAPmessages,conveyedusingHTTPTypicallywithanXML serializationinconjunctionwith otherWeb-related standards. ".

a. JSON

JSONisadata exchangeformatwhichhas thecharacteristics ofa lightweight, easily understoodby humans, andhavetranslatedeasilybycomputer. JSONis based onpartof theJavaScriptprogramming language. JSON formatitself is atext thatis independentof theprogramming languageof any kind,this is because thestyle oflanguage usedisa style that iscommonly usedbyprogrammersfora programming languagefamilyCincludesC, C+ +, C#, Java, JavaScript,Perl,Python, etc. .These propertiesmakeJSONis idealfor useas adata exchangeformat. JSONusingthefollowing form:
Object

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Apair ofname/value that is notSorted.The objectof writingbeginswiththe character"{" (open brace) andends character"}" (curly braces). Eachnameis alwaysfollowed by thecharacter":" (colon), andeachname / value pairsseparatedby thecharacter"," (comma)

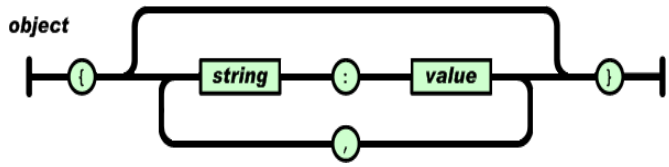

Figure 1 JSON *Object*

b. Array

Arrayis a collection ofvaluesSorted. Arrayalways beginswith thecharacters"[" (open square brackets) andends withthe characters"]" (close brackets). Eachvalueis separatedby thecharacter"," (comma).

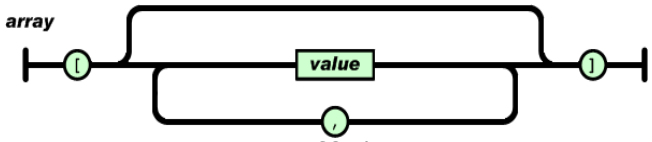

Figure 2JSONArray

c. RemoteProcedureCall

RemoteProcedure Call(RPC) is afairlysimpleprotocolthatis widely used todaytobuildaweb-based services. According toDaveMarshall(1999)RPCdefined"RPC isapowerfultechniqueforconstructingdistributed, client-server basedapplications.Itisbasedonextendingthenotionofconvention al,orlocalprocedurecalling,soThatthecalledprocedureneednot existinthesameaddress spaceasthecallingprocedure. Thetwoprocessesmaybeonthesamesystem, orTheymaybedifferentonthe systemswithanetworkconnectingthem. "

RPCallows usto accessasub-routine that is inanother applicationwhilethe application islocatedon the systemandon different machines. To dothisan applicationservermustprovidea set ofsub-routines whichcan be accessedby client applications. The approachcandilakuanisaserveropensa socket, thenthe serverwillwait fora clientthat calls thesub-routine provided by theserver.

RPCprotocolusesaspecific dataformattoexchangedata, a dataformatthatmanyuse isto useXMLtechnology, theXMLprotocolis usuallynamed withXML-RPC. However, over thetechnology, foundanewdata exchangeformatisJSON, whichhasadvantages overXML, JSON, among others, the natureoflight, easy to readbyhuman beings, easily writtenby humans, as well assmall size,so thatthe resultingbytewill besmaller thanXML. It is certainlyusefulforlaterdataprocessing, whichwill be withthe

fasterthanXML. RPCprotocolwhichusesJSONas adataexchangeformatcalledJSON-RPC

d. JSON-RPC

The basic conceptofJSON-RPC itself is verysimple, which isacommonmechanismconsistingof twosystemsare connectedviaadata connection. Duringthe connectionstillexists,a system canperformto call asub-routine found inother systems.

Tomakelong distancecallsto asub-routine, then theobjectof an objectinquiry ornotificationwill be sendby theclientto theserver, then theserverwillgivethechildobjecttothe processingofthe requestobject, unless itisintheformsentby theclientobjectnotification, theserverwill not givethe objecta replyin responseto theclient.

Acall toasub-routine in theserverby theclientas wellas whento callto alocalsub-routine.When anRPCis done,the inputparameteris mappedtoasub-routine inthe service providerserver, andclientsto callto thesub-routine iswaiting forareplyobjectthat is returnedfrom thesub-routine in thecall.

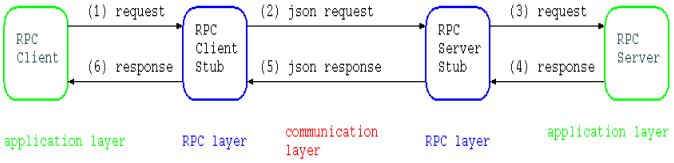

Figure 3FlowprocessesinJSON-RPC

Thepicturedescribesa general mechanismthat occursin theJSON-RPC. In thepicturethere are twomachinescommunicate with each otherviaanetwork, theclientmachineandservermachine.

e. PHP

PHP(PHP HypertextPreprocessor) is aweb-based programminglanguagethat canprocess datadynamically. PHPwill be fullyexecutedby theserverbutis includedin regular HTML pages. ApplicationsareconstructedbyPHPin generalwillgive resultson thewebbrowser,but theoverallprocess isexecuted on the server.In principle, theserverwillworkifthere isa requestfrom theclient. In this case theclientusesPHPcodetosenda request to theserver. WhenusingPHPas thescriptinglanguage ofthe applicationserver, the serverwilldo thefollowing:

- Readrequestfromclient
  Search the site/ pageon theserver
- Performthe instructions givenby thePHPtomake modifications to thepage.
- Sendback the pageto theclientvia theinternetorintranet.

PHPhas severaladvantagesthatcanrun ondifferentplatforms(Windows, Linux, Unix, etc.), Butit'sveryeasy to learnPHP.

f. JAVASCRIPT

JavaScriptisascriptinglanguagebasedon the concept ofprototype-based programming. This language isparticularlywell known forits useinwebsites (as client-side JavaScript), and alsousedtoprovide accesstoobjectsembeddedscriptinanother application.

III. GLOBAL WEB DESIGN BASED SERVICES

Makingweb-based services withJSON-RPC involvestwo applicationsthat are connectedviaadata connection. Duringthe connectionstillexists,anapplicationcanmakecallsandthe execution ofasub-routine iscontained inanotherapplication. Tomakecall toasub-routine inother systems, the objectof an objectinquiry ornotificationwill be sendby theclientapplicationto theapplicationon theserver, then theserverwillprovidethe resultsof processingthe objectofretaliation againsta client applicationbased onthe requestobject, unless thebeing sentby theclientis theobjectofthe notification, then theserverwill not sendanyreplyto theclient. Figure 4 below illustrates theflowchartforthe process ofcommunication that occursbetweenclientandserveron the systemweb-based services withJSON-RPC technologyglobally.

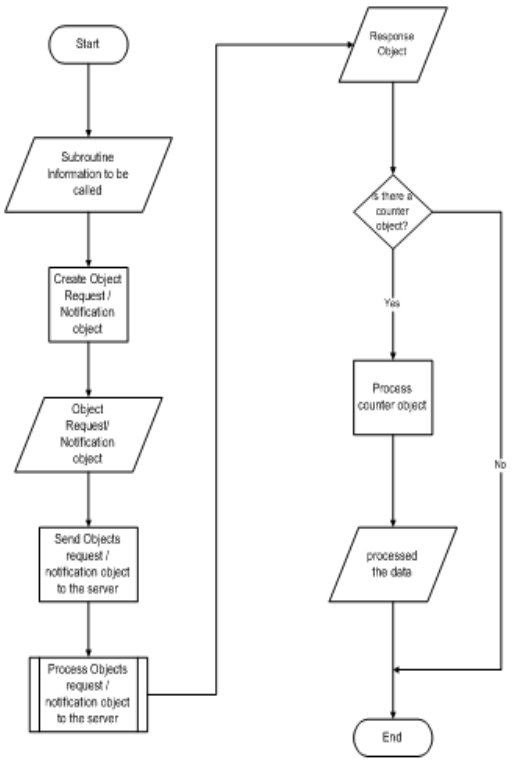

Figure 4 Flowchart Web-Based Service Systems With JSON-RPC

The implementation for this component is a Javascript file that will be placed in the client application At this Javascript file there is a class that is JSONRpcClient class, which has a sub b-routine specification as follow:

TABLE 1

SUB-CLASS ROUTINE JSONRPCCLIENT / JSON-RPC JAVASCRIPT LAYER

No	Nameof Sub-Routine	Uses
1.	JSONRpcClient (vurl,vuser,vpass)	Sub-routine is usefulforearlyinitializationconstructorand venueof theparameteristhe URL where theserver be
2.	JSONRpcClient .prototype.doLogin = function()	Sub-routine is usefulforlogging onto theapplicationserverweb-based serviceproviders
3	JSONRpcClient .prototype.getDataFilm = function(id,namaBioskop)	Sub-routine is usefulforshowing filmsthatare beingairedtodayatseveraltheaters
4	JSONRpcClient .prototype.getDataBioskop = function(id)	Sub-routine is usefulfordisplaying dataexistingcinema
5	function GetXmlHttpObject()	Sub-routine is usefulforobjectsGettingXmlHttpObject, whichwill be usedforaccesstoweb-based serviceprovider's serverviaAJAXtechnology
6	JSONRpcClient .prototype.getHasilPooling = function(id)	Sub-routine is usefulfordisplaying datapoll
7	JSONRpcClient .prototype.setPooling = function(pilihan,id)	Sub-routine is usefulto set theselectionofthe mostpopularmoviepoll
8	function randomString()	Sub-routine is usefultoget arandomstringto be usedas anIDonthe request object

a. *JSON-RPC SERVLET*

Implementation ofJSON-RPC Servletcomponentisin the form ofaclass namedServletJSONRPCwhichis a subclassof theservletclass(javax.servlet.http.HttpServlet) in the javalibrary. Thisclassserves asa liaisonbetweenthe client applicationto theapplicationserver. Allsub-routines that exist inthis classthe same asits parentclass(javax.servlet.http.HttpServlet), withanewsub-routine reimplementationofthesub-routine "doGet" and"doPost".Details canbe seen inthe followingtable:

TABLE2.
SUB-CLASS ROUTINESERVLETJSONRPC(JSON-RPC SERVLET)

No	Nameof Sub-Routine	Uses
1.	doGet(HttpServletRequestreq, HttpServletResponseresp)	Sub-routine will be called whenan objectrequestsentby theclientthroughthe delivery method"GET"
2	doPost(HttpServletRequestreq, HttpServletResponseresp)	Sub-routine will be called whenan objectrequestsentby theclientthroughthe delivery method"POST"

b. *OBJECT HANDLER*

Implementation ofObjecthandlercomponentisaJavaclassnamedtwoRequestHandlerandNotificationHandler

TABLE 3.
SUB-ROUTINE CLASSREQUESTHANDLER(OBJECTHANDLERFOROBJECTREQUEST)

No	Nameof Sub-Routine	Uses
1.	public String[] handledRequests()	Getnamesofall thesub-routine that handlesallthe request object
2	public JSONRPC2Response process(JSONRPC2Request req)	Objectsto processincoming requests

TABLE4.
SUB-ROUTINE NOTIFICATIONHANDLERCLASS(OBJECTHANDLERFOROBJECTNOTIFICATION)

No	Method	Uses
1.	public String[] handledNotifications()	Getnamesofall thesub-routine that handlesallnotificationobjects
2	Public process(JSONRPC2Notification notification)	Processing notification of the entering Objects

IV. TEST RESULTS

The results ofdirect accessto theapplicationserverthrough abrowsercan be seenin the following table:

The test resultsof thesteps- stepsdescribedaboveare asfollows:

- Test resultsshowedthat thecommunicationgoesas expected, and the data isdisplayedin accordancewith data obtainedfrom theserver.
- Test resultsshowedthat theobjectis givenby theserverresponsewas appropriate, andalso supportsthe use ofobjectreturnan error

The results ofdirect accessto theapplicationserverthrough abrowsercan be seenin the following table:

TABLE5.
TESTRESULTSTHROUGHBROWSERAPPLICATIONSERVER

Objectrequest	Objectreplies	Specification
{"id":"hDCV1dNX","method":"getDataBioskop","params":[],"jsonrpc":"2.0"}	{"id":"hDCV1dNX","result":["Citos","Grand Indonesia","Pejaten Village"],"jsonrpc":"2.0"}	
{"method":"poolingFilm","params":["indonesia"],"jsonrpc":"2.0"}	-	There was noreplyobject becausethe objectofthe notification
{"id":"hDCV1dNX","method":"getArtis","params":[],"jsonrpc":"2.0"}	{"id":"hDCV1dNX","error":{"message":"Method not found","code":-32601},"jsonrpc":"2.0"}	Because thesub-routine isnotregistered

V. CONCLUSIONS

Based onimplementationof case studieshave been conducted,it can be concludedas follows:
JSON-RPC canbe used as onealternativesolutiontocreatecross-platform web-based service, whichallowscommunication betweentwo applicationswithdifferent platforms, the process of communicationbetweenclientandserverapplicationswithJSON-RPC is faster andlighter than theotherweb-based servicestechnologythat usesXMLdata exchangeformat, this isbecause it uses theJSONdata interchangeformatusedtomake thetransmitted datasizeis smaller.
Application development processbecomesfaster and more efficientlybecause oftheJSON-RPC technology weapons, thedevelopment ofanapplicationcan be doneseparately for theapplicationserverandclientapplications.

REFERENCES

[1] JSON-RPC.ORG (2005). JSON-RPC Specification. From http://json-rpc.org/, accessed on 2 December 2011

[2] Marshall, Dave(2000). Remote Procedure Calls (RPC). From http://www.cs.cf.ac.uk/Dave/C/node33.html, accessed on 5 December 2011

[3] DigitalMutual AidSociety(MDGR), Introduction toComputer OperatingSystems, 2008.

[4] Wikipedia the Free Encyclopedia (2011), Web Service. From http://en.wikipedia.org/wiki/web_service , accessed on 2 December 2011

[5] w3schools.com(2011). W3Cweb servicetutorial. Fromhttp://www.w3schools.com/webservices/default.asp,accessedon2 December2011

[6] AdbulKadir, BasicDynamicWebPerogramanUsingPHP, AndiYogyakarta, Yogyakarta, 2002

[7] http://www.ittelkom.ac.id/library/index.php?view=article&catid=15%3Apemrosesansinyal&id=304%3Ajson&option=com_content&Itemid=15 (accessed on 24 June 2009)

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