SOAP Vs Rest Basics

SOAP Vs REST APIs

SOAP is like using an envelope
Extra Overhead, more bandwidth required, more work at both the ends of sealing and opening

Application

SERVER

REST is Like POSTCARD
Lighweight, can be cached, and can be updated eas

SOAP Structure

SOAP Envelope	It is the enclosing element of an XML message identifying it as a SOAP message.
SOAP Header	A collection of one or more header blocks targeted at each SOAP receiver.
SOAP Body	Contains the body of the message intended for the SOAP receiver. The interpretation and processing of SOAP body is defined by header blocks.

Authentication Using SOAP

Basic Authentication	Basic Authentication can be enforced by setting a username and password for a webservice request. When the property is enabled 'glide.basicauth.required' then auth header is mandatory

SOAP Message API

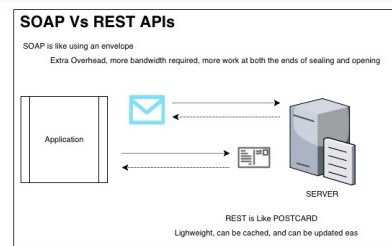| execute()	Send the SOAP message to the endpoint.
executeAsync()	Send the SOAP message to the ECC queue.
getEndpoint()	Get End point of specified SOAP message
getRequestBody()	Get the content of the SOAP message body.
getRequestHeader(headername)	Get the value for an HTTP header specified by the SOAP client.
getRequestHeaders()	Get HTTP headers that were set by the SOAP client and the associated values.
setBasicAuth(username,password)	Set basic authentication headers for the SOAP message.

SOAP Message API (cont)

setEccCorrelator(stringcorrelator)	Associate outbound requests ... ECC queue. Applicable to SO...
setEccParameter(name,value)	Override a value from the data payload
setEndpoint(endpoint)	Set the endpoint for the SOAP...
setHttpTimeout(miliseconds)	Set the amount of time the SO... the web service provider befor...
setLogLevel(level)	Sets the log level for this mess... The Values of level can be ba...
setMIDServer(midservername)	Configure the SOAP message...
setMutualAuth(profilename)	Set the mutual authentication ...
setRequestBody(requestbody)	Set the body content to send t...
setRequestHeader(headername,headervalue)	Set an HTTP header in the SO...
setSOAPAction(soapaction)	Define the SOAP action this S...
setStringParameter(name,value)	Set a variable with the specifie... record to the specified value.
setStringParameterNoEscape(name,value)	Set a variable with the specifie... record to the specified value, c...

SOAP Message API (cont)

setWSSecurity(keystreID,keystrealias,keystrep-swd,certificate)	Sets web service security values for the SOAP message.

Are my Questions answered?

SOAP Concepts & Terminology

Provider : Publishes web service for clients to invoke (consume).

Consumer : Invokes / consumes published web service.

Standards : Standards are described below

WSDL : Web Service Description Language , XML document describing functions, arguments, data schema, and endpoint (where / how to invoke the service, URL)

SOAP : Simple Object Access Protocol, XML document usually HTTP posted to web service endpoint described in WSDL SOAP:Envelope / SOAP:Header / SOAP:Body

HTTP : Hyper-Text Transfer Protocol, POST vs GET - Web Service is POSTed

Direct Webservices

getKeys	Query the targeted table by example values and return a comma delimited sys_id list.	Data Retrieval API
getRecords	Query the targeted table by example values and return all matching records and their fields.	Data Retrieval API
get	Query a single record from the targeted table by sys_id and return the record and its fields.	Data Retrieval API
aggregate	Query using and aggregate functions SUM, COUNT MIN, MAX and AVG. To enable the aggregate functions, activate the Aggregate Web Service Plugin.	Data Retrieval API
insert	Creates a new record for the table targeted in the URL.	Data Modification API
insertMultiple	Creates multiple new records for the table targeted in the URL. To enable multiple inserts, activate the Web Service Insert Multiple Plugin.	Data Modification API
update	Updates a existing record in the targeted table in the URL, identified by the mandatory sys_id field.	Data Modification API

Direct Webservices (cont)

deleteRecord	Deletes a record from the targeted tab... sys_id.
deleteMultiple	Delete multiple records from the targe... example values.

The standard SOAP API is a set of globally defined func... in ServiceNow, these functions cant be changed.

Direct Webservice API is defined by the format https://<i... om/<table name>.do

SOAP Response APIs

getAllHeaders()	Return all headers contained in th... headers.
getBody()	Get the content of the SOAP resp...
getCookies()	Returns all cookies included in the...
getErrorCode()	Get the numeric error code if there... ction.This is not Linked with the H...
getErrorMessage()	Get the error message if there wa...
getHeader(name)	Get the value for a specified HTT... then it will return the last of duplic...
getStatusCode()	Get the numeric HTTP status cod...
haveError()	Indicate if there was an error durir...
waitForResponse(seconds)	Set the amount of time in seconds... from the web service provider.

The API which uses these function is SOAPResponseV...
var r = new sn_ws.SOAPMessageV2('SOAPMessage, '...
var resp = r.execute();
var hdrs = resp.getAllHeaders();
for(var i in hdrs){
gs.log(hdrs[i].name + ': ' + hdrs[i].value);
}

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