


# fnv::soa: (b) API Frequently Asked Questions (from ECG)

Date	Who is asking	Question	Response
June 14, 2017	<a href="#">Risacher, Frederic (F.)</a>	What is the purpose of this wiki page	People are free to post questions regarding the SOA API. The SOA API team will do its best to answer them in a timely manner. This will be beneficial for every SOA developers who may have the same questions/concerns
June 15, 2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	In SOA ,for a Service provider with a specific service end point (e.g. : services/ecg/vim/dashboard)what are the ways to request information ? <ul style="list-style-type: none"> <li>Should each service consumer explicitly send a request to that endpoint (/services/request/ecg/vim/dashboard) and wait for response on response topic (/services/request/ecg/vim/dashboard/#)</li> <li>Or if request broadcast on that topic ?</li> </ul>	<a href="#">Risacher, Frederic (F.)</a>  <b>the request/response topics are only used for RPC. For broadcast, the client will subscribe to "service/data/..." so same client can do an RPC call to VIM and subscribe to a VIM broadcast. These are 2 different subscribes (and topics).</b>
June 15, 2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	When Client hosting service consumers disconnect: - Does Broker(Middleware) need to notify whoever is waiting on a response to that service or whoever is subscribed to a broadcast of that service ?	<a href="#">Risacher, Frederic (F.)</a>  <b>This is not implemented yet (As of June 15) but when a RPC is made and the service has disconnected, the rpc will timeout so the client will get an error. Now for the broadcast, there is obviously no timeout on the subscribe. So 2 scenarios. If the broadcast is coming from a downloaded service, the service Manager will notify the consumer that the status of this service has changed. If this is a native service (not registered with Service Manager) a different mechanism is supported. This is the LWT (Last will and Testament) message. The broker will know if a client is disconnected ungracefully and let the client knows (if the LWT is set)</b>
June 15, 2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	If the Client hosting that service disconnects and reconnects, and there were pending requests before disconnecting, would the service response to those upon reconnecting? Would broker notifies the service that some consumers were waiting for response or the old requests /subscriptions are simply scraped ?	<a href="#">Risacher, Frederic (F.)</a>  we need to think about this one. We have a Jira for it work has not started yet ( <div> ECG-3898 - Jira issue doesn't exist or you don't have permission to view it.</div> )
June 15,2017	Dan Liu	Compiler complains "No such file or directory" in soa_message_proto_pb.hpp #include <google/protobuf/stubs/common.h>  (on develop branch FYI)	<a href="#">Risacher, Frederic (F.)</a>  We have not included some 3rd party libraries and headers as Paho or GoogleProtoBuf. So you need to install those libs by yourself for now. We are planning to put them on the repos for our next week release.
June 19,2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	Are there any illegal characters to be used in the topic name ?  Also is there any length limitation for topics ?	<a href="#">Risacher, Frederic (F.)</a>  I think that pretty much any UTF8 characters are valid except wildcard characters and topic hierarchy separator (+, # and /). The API only discards empty or null string.
June 19,2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	What happens if two processes try to register themselves as a service by using the same topic ?  A process in VIM registers /services/vim/dashboard  another process in VIM (or another component) with different process ID registers itself as /services/vim/dashboard	
June 20,2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	If a SOA Agent has multiple Service Providers /Consumers which has pending RPC operations (Waiting for request or have received request and are processing them to generate response) , and the Client hosting them decide to disconnect, is there a mechanism to delay disconnect until RPC operations are cleared ?	For now, the RPC does not include any mechanism related to this description. We have some Jiras to address the problem.
June 20,2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	For a SOA Gateway , two processes which are SOA Clients. If they need to talk to each other will they go through the broker in ECG or will SOA Gateway deliver that locally ?  Example : Two Services in TCU are connected to SOA Gateway. Service 1 wants to send a request to Service 2. will SOA Gateway realize this is internal IPC communicatin or will it deliver the message to Service 2 through broker ?	<a href="#">Risacher, Frederic (F.)</a>  The SOA Gateway is only used for gateway clients to talk to the ECG. If they need to talk locally to each other, they use the communication mechanism implemented for this purpose i.e. their local IPC.  With regard to the example of TCU services, it would be more efficient to use a different interface. It also depends if the services are exposed to ECG or not.

June 20, 2017	<a href="#">Mahdavis hahri, Keihan (K.)</a>	Since each Service has its own protobuf format, and both service consumer and service provider which sit on different SW components need to use that same format for that particular service to talk to each other. where are these protobuf files stored ? Each process needs to know which ones it will use and need to store them locally or is there a central location for SW components to query the protobuf files/formats they need ?	<a href="#">Risacher, Frederic (F.)</a>  For now, each component hosts its own protobuf and headers files.
June 22, 2017	<a href="#">Brar, Karmindar (K.)</a>	Is there maximum message size limit for SOA message that you are imposing? I know that the spec limit around 262 MegaBytes	<a href="#">Risacher, Frederic (F.)</a>  The SOA API does not impose any limit
July 11, 2017	<a href="#">Marupaka, Nagendra (N.)</a>	Is there a preference in the Endpoint Topic Structure?  SERVICES/REQUEST/ECG/VNM + commandId  vs  SERVICES/REQUEST/VNM + ECG_commandId	<a href="#">Risacher, Frederic (F.)</a>  The SOA team does not enforce the way the endpoint structure is defined after the SERVICES/REQUEST/  I guess you mean SERVICE/REQUEST/ECG/VNM<+commandID> with the '+' sign not included in the endpoint string.  So <commandID> or <ECG_commandID> is up to you. Your selection does not impact the way SOA will work  <a href="#">Reissner, Peter (P.)</a>  I assume the example topic not only does not include the "+" but also does not include the commandId. The commandId is a field in the message which can be used to distinguish requests sent to a common endpoint. Simply send a message containing a specific commandId to endpoint SERVICES/REQUEST/ECG/VNM
July 11, 2017	<a href="#">Marupaka, Nagendra (N.)</a>	Is it okay if a module on SYNC provides a response for an RPC on a ECG consumer endpoint? Example:  Request: SERVICES/REQUEST/SYNC/VNM  Response: SERVICES/RESPONSE/ECG/CM	<a href="#">Risacher, Frederic (F.)</a>  It sounds like a typical request-response scenario so yes this is possible
July 12, 2017	<a href="#">Corbett, Jeff (J.)</a>	I have a few questions about the libsoaframework distribution model: a) is there any plan to unify the header/library release rather than publishing them to separate repos (soa + soa_release)? b) what's the plan for publishing external dependencies like the paho, protobuf and security libs to ensure that proper versions are available on the host machine? c) will there ever be a source distribution so that we could just build & link with locally available resources?	<a href="#">Risacher, Frederic (F.)</a>  a) The release model will be changed soon as we are not going to release the binaries via the soa_release repos. Instead developers will have to build from source directly.  b) The external dependencies are also published as source code (vanilla packages) and people will have to compile them from the external repos.  c) Yes this the plan.
Oct 05, 2017	<a href="#">Hossain, Khalid (K.)</a>	Could you provide some more explanation/examples of the different endpoints needed in the following cases?  1. Create SoaServiceDirectoryManager 2. Create SoaConsumer 3. Service registration  Do all of these need to be valid MQTT topic strings or do only some map to the MQTT topic strings while others are virtual identifiers?	<a href="#">Gao, Kevin (K.)</a>  All of the endpoint text is considered part of the MQTT topic.  1. SERVICES/RESPONSE/<UNIQUE_SDM>, this is the endpoint used by the SDM to receive response to calls to ServiceManager, essentially of the same nature as the Consumer Endpoint.  2. SERVICES/RESPONSE/<UNIQUE_CONSUMER>, this is the endpoint used to receive RPC call response, each remote call will have a unique response endpoint generated based on this endpoint, e.g. SERVICES/RESPONSE /<UNIQUE_CONSUMER>/12.  3. SERVICES/REQUEST/<UNIQUE_SERVICE>, this is the endpoint used to receive RPC call request.
Oct 25, 2017	<a href="#">Marupaka, Nagendra (N.)</a>	Could you please provide concrete examples of a correct RemoteCallAsync implementation in SoaConsumer class? With the changes to the way timeouts/ActionResults/ResponseReceived etc are handled in the new SOA release, I am seeing that my SoaConsumer is timing out waiting for responses.  I tried to follow the example here: <a href="https://github.com/fordcom/ECG/soa/blob/master/test/functionaltest/src/rpc_simple_consumer_test.cpp">https://github.com/fordcom/ECG/soa/blob/master/test/functionaltest/src/rpc_simple_consumer_test.cpp</a>  with the AsyncHelper callback instead of ActionResultListener/ResponseListener, but I seem to be running into some violations related to SoaConsumerInternal/RemoteCallTimeoutTask.  Please help!	<a href="#">Gao, Kevin (K.)</a>  Please send me the error log so I can see what the problem is.

