

Document: CLB specification

Reviewer: Binod

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Response

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Reference	Location	Review Comments	Author's response	Status
minor-1	Section Glossary	It might be good to add what is "proxy"	Pankaj: OK.	
Medium-2	Section 1.3	I thought we are also adding weighted load balancing.	Pankaj: No. Primarily its the DCR which is going to be used for converged-applications. Round-robin is just the default out-of-box for HTTP requests. It's the DCR which is going to ensure that converged application sticky requests are routed to the same backend.	
Medium-3	Section 1.3	Wouldnt Load regulation or overload protection be implemented?	Pankaj: This is not CLB feature. It's a independent component deployed before CLB is invoked.	
Minor-4	Figure-2	It is mentioned that application has a context root. We can be bit more explicitly state that it is only for HTTP	Point 3 does highlight what Context-Root relates to – HTTP URL. Anyway would update the doc to highlight this	

			point.	
Minor-5	Figure-2	Isnt there also a relation between request and listener?	There is no direct relationship between a request and a listener. It's a traversed relationship/association as a result of the request being routed to a selected server instance; which inturn can have one or more listeners.	
Minor-6	Section 2.4.1	Isnt step 2 covered in Step 3? If not, what is the difference?	Pankaj: Step 2 relates to notion of creating a converged loadbalancer and step 3 bring's forth the need to define whether CLB being created is a self load balancing one or it load balances to a backend application cluster.	
Medium-7	Section 2.4.1.2.1	Instead of specifying the "sip" and "http" directly, you can design it as a protocol agnostic and use "sip" and "http" as the supported protocols.	Pankaj: Not clear as to which para / page this comment relates to. Could you provide more context.	
Medium-8	Section 2.4.1.2.1	Why is reload-poll-interval a property?	Pankaj: Since not committed to supporting this. It has kept as an artifact of evolving interface classification.	

Minor-9	Section 2.4.1.2.1	You could intend the “cluster” explicitly as a sub-element of the load balancer.	Pankaj: Need to elaborate the comment.	
Minor-10	-do-	In the “cluster sublements” table, the “property” row seem to have an incomplete sentence.	Pankaj: Would be updated/ removed.	
Medium-11	-do-	Disable-timeout has been specified at the instance level. May be it could be at the cluster level and over-ridable at instance level.	Pankaj: This attribute is a server level attribute, primarily that disabling of a cluster is not a supported notion One can only disable an instance. This attribute is derived from the existing GlassFish domain dtd v1.3	
Minor-12	Section 2.4.1.3.1	Some examples of DCR files may be good	Pankaj: OK. Doc would be updated.	
Medium-13	Section 2.4.2	Shouldnt there be some amount of monitoring support?	Pankaj: Monitoring is not supported for this release.	
Major-14	General	Why cant DCR dtd be merged with load balancer DTD?	Pankaj: a. load balancer xml is a derived file from domain dtd and manual edit are not supported. b. DCR file can get complex and it would be more convenient to keep such rules outside the scope of the load balancer contemporary	

			configuration schema. Also DCR file is manually editable.	
Minor-15	Section 2.4.2.1	The end part of this section has numbered list. It seems numbering is not correct.	Pankaj: Doc would be updated.	
Medium-16	Section 2.4.2.2.1	As per the recent discussions CLB might get requests from a component in the connector rather than the catalina container	<p>Pankaj: This is TBD; there is no existing design /API/ implementation available. These discussions relate to providing a equivalent of a Catalina request interception framework with light weight implementation of Cotoyote Request and Response classes. Effectively any change to existing framework would be taken as a change request. So the last healthy decision point-of-view, CLB is being based on existing Catalina request interception framework.</p> <p>Pankaj (Updated): Connector would support pluggable request interception mechanism. CLB would be invoked as one of pluggable</p>	

			components in this stack passing the connector request, response artifacts.	
Medium-17	General	Will it be possible to use “round-robin” policy in webservice of the converged applications?	Pankaj: "round-robin" is the out-of-box default policy for HTTP requests. Though it is possible to use this; for all practical purposes it is not recommended in a production setup. This is primarily because, it would result in split sessions for the converged applications in backend; that would result in performance degradation of the deployment.	
Minor-18	Section 2.4.2.2.3	Sip responses always will have the routing information, right?	Pankaj: Yes.	
Minor-19	Section 2.4.2.4	Why do you need two different names for the cookies?	Pankaj: They are two different <i>types</i> and <i>values</i> and their usage is governed by whether consistent hashing policy is used or not. For example in the B2B UA case, the invoking container would not be the mapped backend for consistent hashing approach. BERoute	

			would be stamped so that the response comes back to the same backend where the SAS exists.	
Medium-20	Section 2.4.2.6	Even when CLB is a spectator, you need to use GMS apis. So, what is the reference to the GMS client apis in the second bullet point? If CLB is part of self-loadbalance cluster, then you would be able to use the GMS events as a normal member, right?	<p>Pankaj: In case of 2-tier load balancing, there is a fronting CLB and a backend application cluster, CLB would use the approach of instantiating a peer GMSservice registering itself as a "SPECTATOR" to the remote cluster; where by it receives notifications on the backend cluster.</p> <p>In the case of single tier load balancing, self load balancing cluster, CLB simply obtains the reference to existing GMS service started by GMSLifeCycle as a CORE member. The intent is bring forth is difference in approach. Would refine the doc to reflect this.</p>	
Major-21	Section 2.4.2.7	I think the understanding of the replication team is that the quiescing will continue only until	Pankaj: CLB does not track the SIP transactions, it's stateless. From CLB perspective	

		<p>the sip transaction ends. By doing this, we can (almost) avoid the concurrent access to the same session in two instances.</p>	<p>disable-timeout (quiescing period) is the best-effort window of opportunity set by administrator for existing, inflight requests to complete, thereafter which the instance would be taken offline. CLB would identify such an instance as unhealthy after the completion of the quiescing time period.</p>	
Medium-22	Section 2.6.1 IF8	<p>Isn't something like proxy-header needed for sip as well?</p>	<p>Pankaj: There would be no "proxy-header" for HTTP. In case of HTTP; the front-end / CLB would add proxy-* headers for the container. These are sufficient to detect that request has being proxied. For SIP also this is derieved. Consistent hashing lookup would result in selecting the same backend to which the request has been proxied, in which case it would request would be proceed to the next / upper layer in request interception / layer chain.</p>	

			<p>Pankaj (Update): SIP would be using the equivalent proxy-* headers as well. Spec would be updated to reflect the proxy-* headers.</p>	
Medium-23	Section 5.2	<p>Cant we use an event to trigger the dynamic reconfiguration rather than using reload-polling-interval</p>	<p>Pankaj: The plan is to support this – DAS would send out event whenever the file changes. CLB would source the event to reconfigure. Spec would be updated to reflect this.</p>	
Medium-24	Section 6	<p>Packaging of the jars will be specified in Naman's spec for packaging and installation</p>		
Medium-25	Section 8.1.2	<p>Isnt there an implicit step that in the step1, the server will add contact header in such a way that the callee will contact IP sprayer rather than the instance?</p>	<p>Pankaj: This is the intrinsic property of the converged container when publishing the contact header for the TS.</p>	
Medium-26	General	<p>Shouldnt there be a way to configure IP sprayer address somewhere?</p>	<p>Pankaj: This is for the converged container to define.</p>	
Medium-27	General	<p>How long GMS take to inform the CLB about the instance failure? Will there be any timing issue? How</p>	<p>Pankaj: Current implementation of GMS supports 9s as the turnaround time. This needs to</p>	



		is it handled?	be improved to lower the detection time. GMS would signal the notification which CLB sources and relays to its internal constructs. A failed instance is marked as unhealthy and taken out from active load balancing; till a join notification is received for it.	
Medium-27	General	How are false failover notifications handled?	Pankaj: Transient failures are handled by retry mechanism of the GMS. This is a configurable parameter.	
Medium-28	General	The fail-over cases need to be explained as specific usecases.	Pankaj: Specifically Section 2.4.2.4 / 2.4.2.5 details/ elaborates the failover scenario.	
Medium-29	General	It might be good to explain what is the domain.xml DTD for CLB in this spec also. That will give a complete picture.	Pankaj: That's true. The idea is not duplicate and maintain at two places; given that Admin spec anyway should detail the SailFin changes. However, this doc enlist the elements related to CLB. Doc would be updated for this.	
Medium-30	General	It might be good to explain the CLI commands, atleast	Pankaj; Admin spec on CLI owns the	

		a high level overview	commands, and are deliberating on how the commands would look like. At best CLB spec would reference such a doc when its made available.	
Medium-31	General	How does consistent hashing work for HTTP/ConvergedSession requests? Can you add a section for this?	Pankaj: It's no different from SIP – works the same way. Hashing is done on the string value returned as part of execution of the DCR rules. Hash is calculated on the value returned.	

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