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# Voice Microservices Private Edition Guide

Voice RQ Service metrics and alerts

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Find the metrics Voice RQ Service exposes and the alerts defined for Voice RQ Service.

Service	CRD or annotations?	Port	Endpoint/Selector	Metrics update interval
Voice RQ Service	Supports both CRD and annotations	12000	http://:12000/metrics	30 seconds

See details about:

- Voice RQ Service metrics
- Voice RQ Service alerts

## Metrics

You can query Prometheus directly to see all the metrics that the Voice RQ Service exposes. The following metrics are likely to be particularly useful. Genesys does not commit to maintain other currently available Voice RQ Service metrics not documented on this page.

Metric and description	Metric details	Indicator of
<b>rqnode_clients</b> Number of clients connected.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Traffic
<b>rqnode_streams</b> Number of active streams present.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Traffic
<b>rqnode_xreads</b> Number of XREAD requests received.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>rqnode_xadds</b> Number of XADD requests received.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>rqnode_redis_state</b> Current Redis connection state.	<b>Unit:</b> N/A <b>Type:</b> gauge	Errors

Metric and description	Metric details	Indicator of
	<b>Label:</b> <b>Sample value:</b>	
<b>rqnode_redis_disconnects</b> The number of Redis disconnects that occurred for the RQ node.	<b>Unit:</b> <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Errors
<b>rqnode_consul_leader_error</b> Number of errors received from Consul during the leadership process.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Errors
<b>rqnode_active_master</b> Service master role is active.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Saturation
<b>rqnode_active_backup</b> Service backup role is active.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Saturation
<b>rqnode_read_latency</b> RQ latency; that is, the time duration between when an event is added to Redis and when it's read via XREAD.	<b>Unit:</b> <b>Type:</b> histogram <b>Label:</b> le, healthcheck <b>Sample value:</b>	Latency
<b>rqnode_add_latency</b> RQ latency; that is, the time duration between when a message is received and when it's added to the list.	<b>Unit:</b> <b>Type:</b> histogram <b>Label:</b> le, healthcheck <b>Sample value:</b>	Latency
<b>rqnode_redis_latency</b> Latency caused by Redis read/write.	<b>Unit:</b> <b>Type:</b> histogram <b>Label:</b> le <b>Sample value:</b>	Latency

## Alerts

The following alerts are defined for Voice RQ Service.

Alert	Severity	Description	Based on	Threshold
Number of Redis streams is too high	Warning	Too many active sessions. Actions:	rqnode_streams	More than 10000 active streams running.

Alert	Severity	Description	Based on	Threshold
		<ul style="list-style-type: none"> <li>Check whether the horizontal pod autoscaler has triggered and if the maximum number of pods has reached.</li> <li>Check the number of voice, digital, and callback calls in the system.</li> </ul>		
Redis disconnected for 5 minutes	Warning	<p>Redis is not available for the pod {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>If the alarm is triggered for multiple services, make sure there are no issues with Redis, restart Redis.</li> <li>If the alarm is triggered only for the pod {{ \$labels.pod }}, check to see if there is any issue with the pod.</li> </ul>	redis_state	Redis is not available for the pod {{ \$labels.pod }} for 5 minutes.
Redis disconnected for 10 minutes	Critical	<p>Redis is not available for the pod {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>If the alarm is triggered for multiple services, make sure there are no issues with</li> </ul>	redis_state	Redis is not available for the pod {{ \$labels.pod }} for 10 minutes.

Alert	Severity	Description	Based on	Threshold
		<p>Redis, and then restart Redis.</p> <ul style="list-style-type: none"> <li>If the alarm is triggered only for the pod {{ \$labels.pod }}, check to see if there is any issue with the pod.</li> </ul>		
Pod failed	Warning	<p>Pod {{ \$labels.pod }} failed.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>One of the containers in the pod has entered a Failed state. Check the Kibana logs for the reason.</li> </ul>	kube_pod_status_phase	Pod {{ \$labels.pod }} is in Failed state.
Pod Unknown state	Warning	<p>Pod {{ \$labels.pod }} in Unknown state.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>If the alarm is triggered for multiple services, make sure there are no issues with the Kubernetes cluster.</li> <li>If the alarm is triggered only for the pod {{ \$labels.pod }}, check whether the image is correct and if the container is starting up.</li> </ul>	kube_pod_status_phase	Pod {{ \$labels.pod }} in Unknown state for 5 minutes.
Pod Pending state	Warning	Pod {{ \$labels.pod }} is in the Pending state.	kube_pod_status_phase	Pod {{ \$labels.pod }} is in the Pending state for 5 minutes.

Alert	Severity	Description	Based on	Threshold
		<p>Actions:</p> <ul style="list-style-type: none"> <li>If the alarm is triggered for multiple services, make sure the Kubernetes nodes where the pod is running are alive in the cluster.</li> <li>If the alarm is triggered only for the pod {{ \$labels.pod }}, check the health of the pod.</li> </ul>		
Pod not ready for 10 minutes	Critical	<p>Pod {{ \$labels.pod }} in NotReady state.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>If this alarm is triggered, check whether the CPU is available for the pods.</li> <li>Check whether the port of the pod is running and serving the request.</li> </ul>	kube_pod_status_ready	Pod {{ \$labels.pod }} in NotReady state for 10 minutes.
Container restarted repeatedly	Critical	<p>Container {{ \$labels.container }} was repeatedly restarted.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>One of the containers in the pod has entered a failed state. Check the Kibana logs for</li> </ul>	kube_pod_container_status_restarts_total	Container {{ \$labels.container }} was restarted 5 or more times within 15 minutes.

Alert	Severity	Description	Based on	Threshold
		the reason.		
Pod memory greater than 65%	Warning	<p>High memory usage for pod {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Check whether the horizontal pod autoscaler has triggered and if the maximum number of pods has been reached.</li> <li>Check Grafana for abnormal load.</li> <li>Collect the service logs; raise an investigation ticket.</li> </ul>	<p>container_memory_working_set_bytes_kube_pod_container_resource_requests_memory_bytes</p>	<p>Container {{ \$labels.container }} memory usage exceeded 65% for 5 minutes.</p>
Pod memory greater than 80%	Critical	<p>Critical memory usage for pod {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Check whether the horizontal pod autoscaler has triggered and if the maximum number of pods has been reached.</li> <li>Check Grafana for abnormal load.</li> <li>Restart the service.</li> <li>Collect the service logs; raise an investigation ticket.</li> </ul>	<p>container_memory_working_set_bytes_kube_pod_container_resource_requests_memory_bytes</p>	<p>Container {{ \$labels.container }} memory usage exceeded 80% for 5 minutes.</p>



Alert	Severity	Description	Based on	Threshold
Pod CPU greater than 65%	Warning	<p>High CPU load for pod {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Check whether the horizontal pod autoscaler has triggered and if the maximum number of pods has been reached.</li> <li>Check Grafana for abnormal load.</li> <li>Collect the service logs; raise an investigation ticket</li> </ul>	<p>container_cpu_usage_seconds_total, container_spec_cpu_period</p>	<p>Container {{ \$labels.container }} CPU usage exceeded 65% for 5 minutes.</p>
Pod CPU greater than 80%	Critical	<p>Critical CPU load for pod {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Check whether the horizontal pod autoscaler has triggered and if the maximum number of pods has been reached.</li> <li>Check Grafana for abnormal load.</li> <li>Restart the service.</li> <li>Collect the service logs; raise an investigation ticket.</li> </ul>	<p>container_cpu_usage_seconds_total, container_spec_cpu_period</p>	<p>Container {{ \$labels.container }} CPU usage exceeded 80% for 5 minutes.</p>