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# Voice Microservices Private Edition Guide

Voice SIP Proxy Service metrics and alerts

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Find the metrics Voice SIP Proxy Service exposes and the alerts defined for Voice SIP Proxy Service.

Service	CRD or annotations?	Port	Endpoint/Selector	Metrics update interval
Voice SIP Proxy Service	Supports both CRD and annotations	11400	http://:11400/metrics	30 seconds

See details about:

- Voice SIP Proxy Service metrics
- Voice SIP Proxy Service alerts

## Metrics

Voice SIP Proxy Service exposes Genesys-defined, SIP Proxy Service-specific metrics as well as some standard Kafka metrics. You can query Prometheus directly to see all the metrics that the SIP Proxy Service exposes. The following metrics are likely to be particularly useful. Genesys does not commit to maintain other currently available SIP Proxy Service metrics not documented on this page.

Metric and description	Metric details	Indicator of
<b>siproxy_requests_total</b> Total number of received requests.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> method <b>Sample value:</b>	Traffic
<b>siproxy_rejected_requests_total</b> The total number of rejected requests.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Errors
<b>siproxy_requests_processed_self_total</b> The total number of received requests that were processed by SIP Proxy itself.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> method <b>Sample value:</b>	Traffic
<b>siproxy_requests_forwarded_total</b> The total number of forwarded requests.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> method, request_direction, sip_node_id <b>Sample value:</b>	Traffic
<b>siproxy_requests_sip_node_resolved_total</b>	<b>Unit:</b> N/A	Errors

Metric and description	Metric details	Indicator of
Total count of sip-node reselection.	<b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_responses_forwarded_total</b> Total count of forwarded responses.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> method, sip_node_id, request_direction <b>Sample value:</b>	Traffic
<b>siproxy_response_latency</b> SIP response latency.	<b>Unit:</b> <b>Type:</b> histogram <b>Label:</b> le, sip_node_id, request_direction, target, node_in_cache <b>Sample value:</b>	Latency
<b>siproxy_register_processed_total</b> Total number of REGISTER requests that SIP Proxy received for processing.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>siproxy_register_rejected_total</b> Total number of REGISTER requests for processing that were rejected.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Errors
<b>siproxy_calls_per_second_count</b> Current calculated calls per second.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Saturation
<b>siproxy_active_sip_nodes_count</b> Current number of active SIP nodes.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_sip_nodes_count</b> Current number of discovered SIP nodes.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_tenants_count</b> Current count of discovered tenants.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_consul_record_processing_errors_count</b> Current number of errors while processing records got from Consul.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_consul_errors_count</b>	<b>Unit:</b> N/A	

Metric and description	Metric details	Indicator of
Current number of Consul errors.	<b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_sip_node_is_capacity_available</b> Indicates whether SIP node has available capacity or not.	<b>Unit:</b> <b>Type:</b> gauge <b>Label:</b> sip_node_id <b>Sample value:</b>	
<b>service_version_info</b> Displays the version of Voice SIP Proxy Service that is currently running. In the case of this metric, the labels provide the important information. The metric value is always 1 and does not provide any information.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> version <b>Sample value:</b> service_version_info{version="100.0.1000006"} 1	
<b>siproxy_health_level</b> Health level of the SIP Proxy node:  -1 - fail 0 - starting 1 - degraded 2 - pass	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	
<b>siproxy_envoy_proxy_status</b> Status of the Envoy proxy:  -1 - error 0 - disconnected 1 - connected	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b> 1	
<b>siproxy_config_node_status</b> Status of the Config node connection:  0 - disconnected 1 - connected	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b> 1	
<b>sip_server_transactions_created_total</b> Total number of created server transactions.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>sip_client_transactions_created_total</b> Total number of created client transactions.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>sip_server_transactions_deleted_total</b> Total number of deleted server transactions.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>sip_client_transactions_deleted_total</b>	<b>Unit:</b> N/A	Traffic

Metric and description	Metric details	Indicator of
Total number of deleted client transactions.	<b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>sip_client_transactions_count</b> Current number of client transactions.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Saturation
<b>sip_server_transactions_count</b> Current number of server transactions.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Saturation
<b>sip_server_transactions_rejected_total</b> Total number of server transactions rejected for internal reasons.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Errors
<b>sip_proxy_contexts_count</b> Current number of active SIP Proxy forwarding contexts.	<b>Unit:</b> N/A <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	Saturation
<b>sip_received_bytes_total</b> Total traffic received, measured in bytes.	<b>Unit:</b> bytes <b>Type:</b> counter <b>Label:</b> transport <b>Sample value:</b>	Traffic
<b>sip_sent_bytes_total</b> Total traffic sent, measured in bytes.	<b>Unit:</b> bytes <b>Type:</b> counter <b>Label:</b> transport <b>Sample value:</b>	Traffic
<b>sip_transport_errors_total</b> Total number of transport errors.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> transport, address <b>Sample value:</b>	Errors
<b>sip_stream_transport_wait_drain_total</b> Total number of requests to wait for drain events on stream transports.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>sip_stream_transport_flood_total</b> Total number of flood events on the stream transports.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>http_client_request_duration_seconds</b>	seconds	Latency

Metric and description	Metric details	Indicator of
The time duration between the HTTP client request and the response, measured in seconds.	<b>Type:</b> histogram <b>Label:</b> le, target_service_name <b>Sample value:</b>	
<b>http_client_response_count</b> The number of HTTP client responses received.	<b>Unit:</b> N/A <b>Type:</b> counter <b>Label:</b> target_service_name, status <b>Sample value:</b>	Traffic
<b>log_output_bytes_total</b> The total amount of log output, measured in bytes.	<b>Unit:</b> bytes <b>Type:</b> counter <b>Label:</b> level, format, module <b>Sample value:</b> log_output_bytes_total{level="info",format="txt",module="sipproxynode@config-manager"} 3175 log_output_bytes_total{level="info",format="txt",module="sipproxynode@sipproxynode"} 96 log_output_bytes_total{level="info",format="txt",module="sipproxynode@sipproxysip"} 181 log_output_bytes_total{level="info",format="json",module="sipproxynode@config-manager"} 4184 log_output_bytes_total{level="info",format="json",module="sipproxynode@sipproxynode"} 135 log_output_bytes_total{level="info",format="json",module="sipproxynode@sipproxysip"} 259	
<b>kafka_consumer_recv_messages_total</b> Number of messages received from Kafka.	<b>Unit:</b> <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Traffic
<b>kafka_consumer_error_total</b> Number of Kafka consumer errors.	<b>Unit:</b> <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	Errors
<b>kafka_consumer_latency</b> Consumer latency is the time difference between when the message is produced and when the message is consumed. That is, the time when the consumer received the message minus the time when the producer produced the message.	<b>Unit:</b> <b>Type:</b> histogram <b>Label:</b> <b>Sample value:</b>	Latency
<b>kafka_consumer_rebalance_total</b> Number of Kafka consumer rebalance events.	<b>Unit:</b> <b>Type:</b> counter <b>Label:</b> <b>Sample value:</b>	
<b>kafka_consumer_state</b> Current state of the Kafka consumer.	<b>Unit:</b> <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	
<b>kafka_producer_messages_total</b> Number of messages received from	<b>Unit:</b> <b>Type:</b> counter	Traffic

Metric and description	Metric details	Indicator of
Kafka.	<b>Label:</b> <b>Sample value:</b>	
<b>kafka_producer_queue_depth</b> Number of Kafka producer pending events.	<b>Unit:</b> <b>Type:</b> gauge <b>Label:</b> kafka_location <b>Sample value:</b>	Saturation
<b>kafka_producer_queue_age_seconds</b> Age of the oldest producer pending event in seconds.	<b>Unit:</b> seconds <b>Type:</b> gauge <b>Label:</b> kafka_location <b>Sample value:</b>	
<b>kafka_producer_error_total</b> Number of Kafka producer errors.	<b>Unit:</b> <b>Type:</b> counter <b>Label:</b> kafka_location <b>Sample value:</b>	Errors
<b>kafka_producer_state</b> Current state of the Kafka producer.	<b>Unit:</b> <b>Type:</b> gauge <b>Label:</b> kafka_location <b>Sample value:</b>	
<b>kafka_producer_biggest_event_size</b> Biggest event size so far.	<b>Unit:</b> <b>Type:</b> gauge <b>Label:</b> kafka_location, topic <b>Sample value:</b> 231	
<b>kafka_max_request_size</b> Exposed config to compare with biggest event size.	<b>Unit:</b> <b>Type:</b> gauge <b>Label:</b> kafka_location <b>Sample value:</b> 1000000	
<b>kafka_producer_dropped_event_number</b> Number of dropped events.	<b>Unit:</b> number <b>Type:</b> gauge <b>Label:</b> <b>Sample value:</b>	

## Alerts

The following alerts are defined for Voice SIP Proxy Service.

Alert	Severity	Description	Based on	Threshold
Too many Kafka pending events	Critical	Too many Kafka producer pending events for pod {{ \$labels.pod }}.	kafka_producer_queue_depth	Too many Kafka producer pending events for service {{

Alert	Severity	Description	Based on	Threshold
		<p>This alert means there are issues with SIP REGISTER processing on this voice-sipproxy.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Make sure there are no issues with Kafka or with the {{ \$labels.pod }} pod's CPU and network.</li> </ul>		<p>{{ \$labels.container }} (more than 100 in 5 minutes).</p>
SIP server response time too high	Warning	<p>Actions:</p> <ul style="list-style-type: none"> <li>If the alarm is triggered for multiple sipproxy-nodes, make sure there are no issues on {{ \$labels.sip_node_id }}.</li> <li>If the alarm is triggered only for sipproxy-node {{ \$labels.pod }}, check to see if there is an issue with the service related to the topic (CPU, memory, or network overload).</li> </ul>	sipproxy_response_latency_bucket	<p>SIP response latency for more than 95% of messages forwarded to {{ \$labels.sip_node_id }} is more than 1 second for sipproxy-node {{ \$labels.pod }}.</p>
Pod status failed	Warning	<p>Actions:</p> <ul style="list-style-type: none"> <li>Restart the pod and check to see if there are any issues with the pod after restart.</li> </ul>	kube_pod_status_phase	<p>Pod {{ \$labels.pod }} is in Failed state.</p>
Pod status Unknown	Warning	<p>Pod {{ \$labels.pod }} is in Unknown state.</p>	kube_pod_status_phase	<p>Pod {{ \$labels.pod }} is in Unknown state for 5 minutes.</p>

Alert	Severity	Description	Based on	Threshold
		<p>Actions:</p> <ul style="list-style-type: none"> <li>Restart the pod and check to see if there are any issues with the pod after restart.</li> </ul>		
Pod status Pending	Warning	<p>Pod {{ \$labels.pod }} is in Pending state.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Restart the pod and check to see if there are any issues with the pod after restart.</li> </ul>	kube_pod_status_phase	Pod {{ \$labels.pod }} is in Pending state for 5 minutes.
Pod status NotReady	Critical	<p>Pod {{ \$labels.pod }} is in NotReady state.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Restart the pod and check to see if there are any issues with the pod after restart.</li> </ul>	kube_pod_status_ready	Pod {{ \$labels.pod }} is in NotReady state for 5 minutes.
Container restarted repeatedly	Critical	<p>Container {{ \$labels.container }} was repeatedly restarted.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>Check to see if a new version of the image was deployed. Also check for issues with the Kubernetes cluster.</li> </ul>	kube_pod_container_status_restarts_total	Container {{ \$labels.container }} was restarted 5 or more times within 15 minutes.
No sip-nodes available for 2 minutes	Critical	No sip-nodes are available for the pod {{ \$labels.pod }}.	siproxy_active_sip_nodes_count	No sip-nodes are available for the pod {{ \$labels.pod }} for 2 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 there are no issues with sip-nodes.</li> <li>If the alarm is triggered only for pod {{ \$labels.pod }}, check to see if there is any issues with the pod.</li> </ul>		
sip-node capacity limit reached	Warning	<p>The sip-node {{ \$labels.sip_node_id }} hit capacity limit on {{ \$labels.pod }}.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>If alarm is triggered for multiple services make sure there is no issues with sip-node {{ \$labels.sip_node_id }}.</li> <li>If alarm is triggered only for pod {{ \$labels.pod }} check if there is any issue with the pod</li> </ul>	siproxy_sip_node_is_capacity_aware	<p>The sip-node {{ \$labels.sip_node_id }} hit capacity limit on {{ \$labels.pod }} for 3 consecutive 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</li> </ul>	container_cpu_usage_seconds_total / container_spec_cpu_period	<p>Container {{ \$labels.container }} CPU usage exceeded 80% for 5 minutes.</p>

Alert	Severity	Description	Based on	Threshold
		<p>and the maximum number of pods has been reached.</p> <ul style="list-style-type: none"> <li>• Check Grafana for abnormal load.</li> <li>• Collect the service logs for pod {{ \$labels.pod }} and raise an investigation ticket.</li> </ul>		
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 the maximum number of pods has been reached.</li> <li>• Check Grafana for abnormal load.</li> <li>• Collect the service logs for pod {{ \$labels.pod }} and raise an investigation ticket.</li> </ul>	<p>container_cpu_usage_seconds_total</p> <p>container_spec_cpu_period</p>	<p>Container {{ \$labels.container }} CPU 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</li> </ul>	<p>container_memory_working_set_bytes</p> <p>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
		<p>has triggered and the maximum number of pods has been reached.</p> <ul style="list-style-type: none"> <li>• Check Grafana for abnormal load.</li> <li>• Restart the service for pod {{ \$labels.pod }}.</li> </ul>		
Pod memory greater than 65%	Warning	<p>Pod {{ \$labels.pod }} has high memory usage.</p> <p>Actions:</p> <ul style="list-style-type: none"> <li>• Check whether the horizontal pod autoscaler has triggered and the maximum number of pods has been reached.</li> <li>• Check Grafana for abnormal load.</li> <li>• Collect the service logs for pod {{ \$labels.pod }} and 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>
Config node fail	Warning	<p>The request to the config node failed.</p> <p>Action:</p> <ul style="list-style-type: none"> <li>• Check if there is any problem with pod {{ \$labels.pod }} and config node.</li> </ul>	<p>http_client_response_count</p>	<p>Requests to the config node fail for 5 consecutive minutes.</p>