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# Interaction Server Private Edition Guide

Interaction Server (IXN) metrics and alerts

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Find the metrics Interaction Server (IXN) exposes and the alerts defined for Interaction Server (IXN).

Service	CRD or annotations?	Port	Endpoint/Selector	Metrics update interval
Interaction Server (IXN)	PodMonitor	13131, 13133, 13139	option <b>ixnServer.ports.health</b> - default port 13131 - Endpoint: <code>"/health/prometheus/all"</code>  option <b>ixnNode.ports.default</b> - default port 13133 - Endpoint: <code>"/metrics"</code>  option <b>ixnVQNode.ports.health</b> - default port 13139 - Endpoint: <code>"/metrics"</code>  <b>Note:</b> The above options are references to ports that match endpoints. Use these options to perform the associated query.	Default

## Metrics

This table includes IXN Server metrics and IXN Node metrics. IXN Node metrics begin with the prefix *ixnnode*.

**Note:** There are more metrics than the ones listed in the table. However, only the metrics listed in the table are supported.

Metric and description	Metric details	Indicator of
<b>ixn_health_info_current_clients</b> Indicates the number of clients that are connected to IXN at the moment.	<b>Unit:</b> Amount <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b> 5	Workload
<b>ixn_health_info_current_routers</b> Indicates the number of 'connected to' IXN routers.	<b>Unit:</b> Amount <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b> 1	Workload, Operability
<b>ixn_health_info_client_count { client_type_name="Agent application" }</b>	<b>Unit:</b> Amount <b>Type:</b> Gauge <b>Label:</b> client_type_name. See the metric description for more details.	Workload

Metric and description	Metric details	Indicator of
<p>Indicates the number of clients with specified type, connected to IXN.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>client_type_name - type of connected clients. Possible values are: <ul style="list-style-type: none"> <li>Unknown</li> <li>Proxy</li> <li>Agent application</li> <li>Media server</li> <li>Reporting engine</li> <li>Routing engine</li> <li>Universal router</li> <li>Third party client.</li> </ul> </li> </ul>	<p><b>Sample value:</b> 101</p>	
<p><b>ixn_health_info_router_total_submitted { router_name="URServer" }</b></p> <p>Indicates the total number of interactions that have been submitted to the router.</p> <p><b>Label descriptions:</b></p> <p>router_name - the name of the router into which the interactions have been submitted.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter</p> <p><b>Label:</b> router_name. See the metric description for more details.</p> <p><b>Sample value:</b> 33</p>	Workload, Operability
<p><b>ixn_health_info_router_strategy_load_count { router_name="URServer", strategy_name="AAAstarterStrategy", strategy_tenant="1" }</b></p> <p>Indicates the number of strategies with specified name loaded into a specified router.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>router_name - the name of the router into which the interactions are loaded</li> <li>strategy_name - name of strategy</li> <li>strategy_tenant - tenant number</li> </ul>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Gauge</p> <p><b>Label:</b> router_name, strategy_name, strategy_tenant. See the metric description for more details.</p> <p><b>Sample value:</b> 1</p>	Workload

Metric and description	Metric details	Indicator of
<b>ixn_health_info_router_current_capacity</b> <b>{ router_name="URServer" }</b>  Indicates the current capacity of a specified router - the number of interactions, not including those already submitted, that can be submitted into the router.  <b>Label descriptions:</b>  router_name - name of router.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> router_name. See the metric description for more details. <b>Sample value:</b> 987	Workload, Operability
<b>ixn_health_info_router_currently_submitted</b> <b>{ router_name="URServer" }</b>  Indicates the number of interactions that are in a specified router.  <b>Label descriptions:</b>  router_name - name of router.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> router_name. See the metric description for more details. <b>Sample value:</b> 13	Workload, Operability
<b>ixn_health_info_current_strategies</b>  Indicates number of strategies which are associated with active submitters.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b> 11	Workload
<b>ixn_health_info_router_max_submitted</b> <b>{ router_name="URServer" }</b>  Indicates the maximum capacity of specified router - the number of interactions, that can be submitted into the router.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>router_name - name of router.</li> </ul> $ixn\_health\_info\_router\_max\_submitted = ixn\_health\_info\_router\_currently\_submitted + ixn\_health\_info\_router\_current\_capacity$	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> router_name. See the metric description for more details. <b>Sample value:</b> 1000	Workload, Operability
<b>ixn_health_info_current_database_requests</b>  Indicates the current database requests queue length.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b> 0	Workload, Operability
<b>ixn_health_info_total_database_requests</b>  Indicates the number of processed database requests from IXN application start till current moment.	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> None <b>Sample value:</b> 75	Workload, Operability
<b>ixn_health_info_current_database_connections</b>  Indicates the current number of DB connections.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> None	Workload, Operability

Metric and description	Metric details	Indicator of
	Sample value: 5	
<b>ixn_health_info_total_database_deadlocks</b> Indicates the total number of database queries that end up with a deadlock for all the time since IXN started.	<b>Type:</b> Counter <b>Label:</b> None <b>Sample value:</b> 0	Workload, Operability
<b>ixn_health_info_router_strategy_last_submitted_at { router_name="URServer", strategy_name="AAASstarterToAgent", strategy_tenant="1" }</b> Indicates the Unix timestamp when last interaction has been submitted to router for specified strategy. <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>router_name - name of router;</li> <li>strategy_name - name of strategy;</li> <li>strategy_tenant - tenant number.</li> </ul>	<b>Unit:</b> Unix timestamp <b>Type:</b> Gauge <b>Label:</b> router_name, strategy_name, strategy_tenant. See the metric description for more details. <b>Sample value:</b> 1618322383	Workload, Operability
<b>ixn_health_info_queue_media_waiting_processing { queue_name="AAASstarterQueue", queue_tenant="1", media_name="chat" }</b> Indicates the current number of interactions with specified media type that are waiting for processing in a specified queue. <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>queue_name - name of queue;</li> <li>queue_tenant - tenant number;</li> <li>media_name - media type.</li> </ul> Note: This value is provided in Pulse as well.	<b>Unit:</b> Amount <b>Type:</b> Gauge <b>Label:</b> queue_name, queue_tenant, media_name. See the metric description for more details. <b>Sample value:</b> 0	Workload
<b>ixn_health_info_agent_logged_in_count { agent_tenant="1" }</b> Indicates the current number of logged in agents.	<b>Unit:</b> Amount <b>Type:</b> Gauge <b>Label:</b> agent_tenant. See the metric description for more details. <b>Sample value:</b> 565	Workload

Metric and description	Metric details	Indicator of
agent_tenant - tenant number.		
<b>ixn_health_info_queue_media_in_router</b> <b>{ queue_name="toAgent", queue_tenant="1", media_name="chat" }</b>  Indicates the number of the interactions with specified media type from a specified queue being routed.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>queue_name - name of queue</li> <li>queue_tenant - tenant number</li> <li>media_name - media type</li> </ul>	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> queue_name, queue_tenant, media_name. See the metric description for more details. <b>Sample value:</b> 10	Workload, Operability
<b>ixn_health_info_queue_media_on_agent</b> <b>{ queue_name="toAgent", queue_tenant="1", media_name="chat" }</b>  Indicates the number of the interactions with specified media type from specified queue being handled by agents.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>queue_name - name of queue</li> <li>queue_tenant - tenant number</li> <li>media_name - media type</li> </ul>	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> queue_name, queue_tenant, media_name. See the metric description for more details. <b>Sample value:</b> 5	Workload, Operability
<b>ixn_health_info_queue_media_current_length</b> <b>{ queue_name="toAgent", queue_tenant="1", media_name="chat" }</b>  Indicates the number of interactions with specified media type that are waiting processing in specified queue and were never delivered to agent.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>queue_name - name of queue</li> <li>queue_tenant - tenant number</li> <li>media_name - media type</li> </ul> <b>Note:</b> This value is provided in Pulse as well.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> queue_name, queue_tenant, media_name. See the metric description for more details. <b>Sample value:</b> 2	Workload, Operability
<b>ixn_health_info_queue_media_in_processing</b>		Workload, Operability

Metric and description	Metric details	Indicator of
<p><b>{ queue_name="toAgent", queue_tenant="1", media_name="chat" }</b></p> <p>Indicates the sum of the interactions with specified media type from specified queue being routed by routers and being handled by agents.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>queue_name - name of queue</li> <li>queue_tenant - tenant number</li> <li>media_name - media type</li> </ul> <p><i>ixn_health_info_queue_media_in_processing = ixn_health_info_queue_media_in_router + ixn_health_info_queue_media_on_agent</i></p> <p><b>Note:</b> This value is provided in Pulse as well.</p>	<p><b>Type:</b> Gauge  <b>Label:</b> queue_name, queue_tenant, media_name. See the metric description for more details.  <b>Sample value:</b> 15</p>	
<p><b>ixn_health_info_router_strategy_currently_submitted { router_name="URServer", strategy_name="AAAS StarterToAgent", strategy_tenant="1" }</b></p> <p>Indicates the number of interactions which are submitted to specified router by specified strategy at the moment.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>router_name - name of router</li> <li>strategy_name - name of strategy</li> <li>strategy_tenant - tenant number</li> </ul>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Gauge  <b>Label:</b> router_name, strategy_name, strategy_tenant. See the metric description for more details.  <b>Sample value:</b> 3</p>	Workload, Operability
<p><b>ixn_health_info_router_strategy_current_capacity { router_name="URServer", strategy_name="AAAS StarterToAgent", strategy_tenant="1" }</b></p> <p>Indicates the number of interactions that can be submitted more to specified router by specified strategy.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>router_name - name of router</li> <li>strategy_name - name of strategy</li> <li>strategy_tenant - tenant number</li> </ul>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Gauge  <b>Label:</b> router_name, strategy_name, strategy_tenant. See the metric description for more details.  <b>Sample value:</b> 197</p>	Workload, Operability

Metric and description	Metric details	Indicator of
<b>ixn_health_info_router_strategy_total_submitted</b> <b>{ router_name="URServer", strategy_name="AAASstarterToAgent", strategy_tenant="1" }</b>  Indicates the number of interactions that were submitted to specified router by specified strategy since IXN app start till now.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>router_name - name of router</li> <li>strategy_name - name of strategy</li> <li>strategy_tenant - tenant number</li> </ul>	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> router_name, strategy_name, strategy_tenant. See the metric description for more details. <b>Sample value:</b> 9	Workload, Operability
<b>ixnnode_interactions_pulled_total</b>  Indicates the total number of the interactions pulled for the specific strategy.  <b>Label descriptions:</b>  strategy - The name of the strategy for which interactions are pulled.	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> strategy. See the metric description for more details. <b>Sample value:</b>	Workload, Operability
<b>ixnnode_routing_sessions_current</b>  Indicates the current number of the routing sessions in routing.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b>	Workload
<b>ixnnode_all_instructions_received_total</b>  Indicates the total number of instructions (of any type) received from ORS service.	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> None <b>Sample value:</b>	Workload, Operability
<b>ixnnode_routing_instructions_received_total</b>  Indicates the total number of received routing instructions.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>strategy - The name of the strategy for which routing instructions is received.</li> <li>type - The type of the instruction. It takes values "terminal" and "non-terminal". Terminal instructions are RequestDeliver, RequestPlaceInQueue,</li> </ul>	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> strategy, type. See the metric description for more details. <b>Sample value:</b>	Workload, Operability

Metric and description	Metric details	Indicator of
RequestPlaceInWorkbin, RequestStopProcessing.		
<b>ixnnode_redis_client_status</b>  Indicates the status of Redis client.  <b>Label descriptions:</b>  redis_client - The Redis client instance for which the metric is present. It takes values "reader" and "writer".  Value:  0 - Not Ready  1 - Ready	<b>Unit:</b> Status  <b>Type:</b> Gauge <b>Label:</b> redis_client. See the metric description for more details. er". <b>Sample value:</b>	Operability
<b>ixnnode_redis_client_errors_total</b>  Indicates the total number of errors occurred on Redis client.  <b>Label descriptions:</b>  redis_client - The Redis client instance for which the metric is present. It takes values "reader" and "writer".	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> redis_client. See the metric description for more details. <b>Sample value:</b>	Error
<b>ixnnode_redis_client_node_status</b>  Indicates the status of connection to individual nodes of Redis server (in singleton mode matches to ixnnode_redis_client_status).  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>redis_client - The Redis client instance for which the metric is present. It takes values "reader" and "writer".</li> <li>node - The node of Redis server for which the metric is present as "host:port".</li> </ul> Value:  0 - Ready  1 - Not Ready  2 - Wait (so far there have been no connection attempts)	<b>Unit:</b> Status  <b>Type:</b> Gauge <b>Label:</b> redis_client, node. See the metric description for more details. <b>Sample value:</b>	Operability
<b>ixnnode_redis_client_node_errors_total</b>  Indicates the total number of errors occurred on individual nodes of Redis client (in singleton mode matches to	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> redis_client, node. See the metric description for more details.	Error

Metric and description	Metric details	Indicator of
<p>ixnnode_redis_client_errors_total).</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>redis_client - The Redis client instance for which the metric is present. It takes values "reader" and "writer".</li> <li>node - The node of Redis server for which the metric is present as "host:port".</li> </ul>	<p><b>Sample value:</b></p>	
<p><b>ixnnode_redis_commands_completed_total</b></p> <p>Indicates the total number of successfully completed redis commands.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>redis_client - The Redis client instance for which the metric is present. It takes values "reader" and "writer".</li> <li>command - The Redis command for which the metric is present. It takes values "xadd", "xread", "xdel".</li> </ul>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter</p> <p><b>Label:</b> redis_client, command. See the metric description for more details.</p> <p><b>Sample value:</b></p>	<p>Workload, Operability</p>
<p><b>ixnnode_redis_commands_failed_total</b></p> <p>Indicates the total number of failed redis commands.</p> <p><b>Label descriptions:</b></p> <ul style="list-style-type: none"> <li>redis_client - The Redis client instance for which the metric is present. It takes values "reader" and "writer".</li> <li>command - The Redis command for which the metric is present. It takes values "xadd", "xread", "xdel".</li> </ul>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter</p> <p><b>Label:</b> redis_client, command. See the metric description for more details.</p> <p><b>Sample value:</b></p>	<p>Error</p>
<p><b>ixnnode_rq_client_status</b></p> <p>Indicates the status of connection to RQ Service nodes.</p> <p><b>Label descriptions:</b></p> <p>rq_node - RQ Service node for which the metric is present.</p>	<p><b>Unit:</b> Status</p> <p><b>Type:</b> Gauge</p> <p><b>Label:</b> rq_node. See the metric description for more details.</p> <p><b>Sample value:</b></p>	<p>Operability</p>

Metric and description	Metric details	Indicator of
<b>ixnnode_rq_requests_failed_total</b> <p>Indicates the total number of failed requests to RQ Service.</p> <p><b>Label descriptions:</b></p> <p>type - The type of the failed requests. It takes values "isp_event" - interaction protocol evnts and "ixn_ping" - health check messages.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter  <b>Label:</b> type. See the metric description for more details.  <b>Sample value:</b></p>	Error
<b>ixnnode_instructions_processing_unique_concurrency_limit</b> <p>Indicates the maximum number of routing instructions that can be processed in parallel.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Gauge  <b>Label:</b> None  <b>Sample value:</b></p>	n/a
<b>ixnnode_instructions_processing_queue_size</b> <p>Indicates the number of instructions received from ORS currently being processed.</p> <p><b>Label descriptions:</b></p> <p>type - The type of the instruction. It takes values "isp_request" - routing instruction and "ixn_ping" - reply to health check message.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Gauge  <b>Label:</b> type. See the metric description for more details.  <b>Sample value:</b></p>	Workload, Operability
<b>ixnnode_pull_request_total</b> <p>Indicates the total number of RequestPull requests successfully completed by InteractionServer.</p> <p><b>Label descriptions:</b></p> <p>strategy - The strategy for which interactions are pulled.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter  <b>Label:</b> strategy. See the metric description for more details.  <b>Sample value:</b></p>	Workload, Operability
<b>ixnnode_route_request_sent_total</b> <p>Indicates the total number of route requests successfully sent to ORS.</p> <p><b>Label descriptions:</b></p> <p>strategy - The strategy to which requests are sent.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter  <b>Label:</b> strategy. See the metric description for more details.  <b>Sample value:</b></p>	Workload, Operability
<b>ixnnode_route_request_failed_total</b> <p>Indicates the total number of route requests failed to send to ORS.</p> <p><b>Label descriptions:</b></p> <p>strategy - The strategy to which requests are sent.</p>	<p><b>Unit:</b> Amount</p> <p><b>Type:</b> Counter  <b>Label:</b> strategy. See the metric description for more details.  <b>Sample value:</b></p>	Error
<b>ixnnode_instructions_processed_unitxAmount</b>	<p><b>Unit:</b> Amount</p>	Workload

Metric and description	Metric details	Indicator of
Indicates the number of routing instructions currently being processed by IXN Server.	<b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b>	
<b>ixnnode_interactions_placed_back_total</b>  Indicates the total number of times an interaction was placed back in queue.  <b>Label descriptions:</b> <ul style="list-style-type: none"> <li>reason - The reason of placing back in queue. It takes values:  "StrategyOldQueueRequest" - Strategy explicitly requested to place to valid queue with name (not "BACK") matching the name of queue interaction was pulled from. Set by ORS.  "StrategyBackRequest" - Strategy requested placing interaction "BACK" explicitly. Set by ORS.  "Implicit" - Strategy did nothing and ORS places interaction back cause there are no instructions for it. Set by ORS.  "Error" - ORS places interaction back into queue due to some error regardless of the error source be it strategy itself or any other reason. Set by ORS.  "SubmitError" - IXN Node failed to send interaction to ORS and places it back into queue.  "Unknown" - The reason was not specified by ORS.</li> <li>strategy - The strategy which routed interactions.</li> </ul>	<b>Unit:</b> Amount  <b>Type:</b> Counter <b>Label:</b> reason, strategy. See the metric description for more details. <b>Sample value:</b>	Workload, Error, ORS Error
<b>ixnnode_running_strategies_current</b>  Indicates the number of the strategies for which interactions currently are being pulled.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b>	Operability
<b>ixnnode_configured_strategies_current</b>  Indicates the number of the strategies read from configuration for which interactions should be pulled.	<b>Unit:</b> Amount  <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b>	Operability

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Metric and description	Metric details	Indicator of
<b>ixnnode_configuration_fetch_errors_total</b>  Indicates the total number of error occurred while fetching configuration from Configuration Service.	<b>Unit:</b> Count <b>Type:</b> Counter <b>Label:</b> None <b>Sample value:</b>	Error
<b>ixnnode_last_fetched_configuration_timestamp</b>  Indicates the last time the configuration was successfully fetched from Configuration Service as the number of seconds since January 1 1970 UTC.	<b>Unit:</b> Timestamp <b>Type:</b> Gauge <b>Label:</b> None <b>Sample value:</b>	Operability

## Alerts

No alerts are defined for Interaction Server.