

**Most common causes of bad result  
for each indicator  
or  
for a group of indicator**

Latence Technologie

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# 1 Most common issues and their origin

Table 1: Most Common issues on latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data on dashboard	Agent/reflector host not running	Check the VM hosting agent/reflector apps and start it if down
		Network connection down on one or both side agent/reflector	make sure that hosts are connected to the network
		Container down on one or both agent/reflector	start/restart the container services
		Agent configuration file	Check configuration on agent side if it use the correct value on reflector IP, analyzer IP
		License validity	Check application license validity date, contact Latencetech for new license or renewal
		Capacity overload	Make sure that agent/reflector hosts hardware capacity follows the minimum requirement suggested in docs
		Firewall issue	Make sure that the firewall service on both side allows ports used by each protocols and the exposed ports in prerequisites documentation
02	One or some protocols doesn't show values (not all)	Depend on used protocol	Check the according issues in corresponding protocols in table : 7 to 13
03	All protocols shows higher value than usual	Network congestion	Check the network traffic on both side (agent/reflector). Excessive traffic on one or both side will cause an increasing values of latency.
		Interference or Signal Quality (Wireless Networks)	Check the wireless network status, and make sure that there is no interference/other issues on both sides (reflector/agent)
		Physical network issues	It can be caused by physical network path. Network packet takes a longer path than usual. Contact the network administrator
		Router or Switch Performance	Review and optimize network configurations, router and switch settings. Ensure that devices are not overloaded
		Network Congestion due to DDoS Attacks	Implement DDoS mitigation solutions to mitigate the impact of DDoS attacks, preventing network congestion.
04	one or some protocols shows higher value than usual (not all)	Depend on used protocol	Check the according issues in corresponding protocols in table : 7 to 13
05	Slow degradation latency	Increased network usage	Prevent backup solution (increase bandwidth, QoS configuration), as this issue will appear during peak hour of the day.
		Attempted virus attack or hacking	Check the firewall and the overall security system

## 2 Http protocol

Table 3: Issues on http protocol latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data	Agent or/and reflector apps in container not working	Restart apps in container or restart the entire container
		DNS Problems impacting the http requests	Check agent/reflector hosts network configuration
		Reflector web server not working	Check the web server service in reflector container or restart the container
		Port tcp 80/12080 blocked	Check the firewall service and opens the tcp port 80 and 12080 used by the http protocol, to communicate between reflector/agent and agent/analyzer.
02	Higher values than usual for a long period	High server load	Check if http server in the reflector side is overused
		Proximity and Routing problem	Check the physical distance between the two end points, as well as the routing path taken by data packets.
		Firewall and Security Device issue	Optimize security policies and configurations in firewalls and security devices to reduce processing delays while maintaining security
04	Higher values in a short period	Saturation of Network Links	Implement load balancing to distribute traffic efficiently and prevent overload on specific servers or network paths.
		Network Routing Issues	Optimize routing configurations, including using route summarization, to ensure efficient traffic routing and minimal latency.
03	Apparition of pic values	High utilization of network resources	Check if network devices (router, switch,...) transit to much traffic.
		High utilization of hardware resources	Check application/services resources (memory, cpu, ...) utilization

### 3 Htpps protocol

Table 5: Issues on https protocol latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data	Agent or/and reflector apps in container not working	Restart apps in container or restart the entire container
		DNS Problems impacting the http requests	Check agent/reflector hosts network configuration
		Reflector web server not working	Check the web server service in reflector container or restart the container
		Port tcp 80/443/12080/12443 blocked	Check the firewall service and open the tcp port 80,443,12080,12443 used by the https protocol, to communicate between reflector/agent and agent/analyzer.
02	Higher values than usual for a long period	High server load	Check if https server in the reflector side is overused
		Proximity and Routing problem	Check the physical distance between the two end points, as well as the routing path taken by data packets.
		Firewall and Security Device issue	Optimize security policies and configurations in firewalls and security devices to reduce processing delays while maintaining security
		Security issue	Check the security protocols and measures (HTTP-S/TLS encryption) which can introduce additional latency.
04	Higher values in a short period	Saturation of Network Links	Implement load balancing to distribute traffic efficiently and prevent overload on specific servers or network paths.
		Network Routing Issues	Optimize routing configurations, including using route summarization, to ensure efficient traffic routing and minimal latency.
03	Apparition of pic values	High utilization of network resources	Check if network devices (router, switch,...) transit to much traffic.
		High utilization of hardware resources	Check application/services resources (memory, cpu, ...) utilization

## 4 Icmp protocol

Table 7: Issues on icmp protocol latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data	Agent or/and reflector apps in container not working	Restart apps in container or restart the entire container <b>verifier si l'app fonctionne des deux cotés</b>
		<u>DNS Problems</u> impacting the icmp requests	Check agent/reflector hosts network configuration
		Reflector web server not working	Check the web server service in reflector container or restart the container
		Icmp ports blocked	Check the firewall service and opens the ports used by the Icmp protocol, to communicate between reflector/agent and agent/analyser.
02	Higher values than usual for a long period	Proximity and Routing problem	Check the physical distance between the two end points, as well as the routing path taken by data packets.
		Quality of Service (QoS) Issues	Implement QoS policies to prioritize critical network traffic, make sure that latency-sensitive applications receive the necessary bandwidth.
		Firewall and Security Device issue	Optimize security policies and configurations in firewalls and security devices to reduce processing delays while maintaining security
		Buffering Issues	Check network devices (router, switch) as this issues may come from various point of the network when buffer become full or are misconfigured
		Jitter issue	Check the network as an inconsistent network conditions or variations in packet delivery times can result in increased latency.
04	Higher values in a short period	Saturation of Network Links	Implement load balancing to distribute traffic efficiently and prevent overload on specific servers or network paths.
		Network Routing Issues	Optimize routing configurations, including using route summarization, to ensure efficient traffic routing and minimal latency.
03	Apparition of pic values	High utilization of network resources	Check if network devices (router, switch,...) transit to much traffic.
		High utilization of hardware resources	Check application/services resources (memory, cpu, ...) utilization

## 5 Tcp protocol

Table 9: Issues on tcp protocol latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data	Agent or/and reflector apps in container not working	Restart apps in container or restart the entire container
		DNS Problems impacting the http requests	Check agent/reflector hosts network configuration
		Reflector web server not working	Check the web server service in reflector container or restart the container
		Port tcp 12023 blocked	Check the firewall service and opens the tcp port 12023 used by the tcp protocol, to communicate between reflector/agent and agent/analyzer.
02	Higher values than usual for a long period	Proximity and Routing problem	Check the physical distance between the two end points, as well as the routing path taken by data packets.
		Quality of Service (QoS) Issues	Implement QoS policies to prioritize critical network traffic, make sure that latency-sensitive applications receive the necessary bandwidth.
		Firewall and Security Device issue	Optimize security policies and configurations in firewalls and security devices to reduce processing delays while maintaining security
		Buffering Issues	Check network devices (router, switch) as this issues may come from various point of the network when buffer become full or are misconfigured
04	Higher values in a short period	Saturation of Network Links	Implement load balancing to distribute traffic efficiently and prevent overload on specific servers or network paths.
		Network Routing Issues	Optimize routing configurations, including using route summarization, to ensure efficient traffic routing and minimal latency.
03	Apparition of pic values	High utilization of network resources	Check if network devices (router, switch,...) transit to much traffic.
		High utilization of hardware resources	Check application/services resources (memory, cpu, ...) utilization

## 6 Udp protocol

Table 11: Issues on udp protocol latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data	Agent or/and reflector apps in container not working	Restart apps in container or restart the entire container
		DNS Problems impacting the http requests	Check agent/reflector hosts network configuration
		Reflector web server not working	Check the web server service in reflector container or restart the container
		UDP Ports 24/12024 blocked	Check the firewall service and opens the port 24 and 12024 used by the udp protocol, to communicate between reflector/agent and agent/analyzer.
02	Higher values than usual for a long period	High server load	Check if udp server in the reflector side is overused
		Proximity and Routing problem	Check the physical distance between the two end points, as well as the routing path taken by data packets.
		Quality of Service (QoS) Issues	Implement QoS policies to prioritize critical network traffic, make sure that latency-sensitive applications receive the necessary bandwidth.
		Firewall and Security Device issue	Optimize security policies and configurations in firewalls and security devices to reduce processing delays while maintaining security
		Buffering Issues	Check network devices (router, switch) as this issues may come from various point of the network when buffer become full or are misconfigured
		Jitter issue	Check the network as an inconsistent delivery times can affect UDP latency-sensitive applications, causing variation in packet arrival times.
04	Higher values in a short period	Saturation of Network Links	Implement load balancing to distribute traffic efficiently and prevent overload on specific servers or network paths.
		Network Routing Issues	Optimize routing configurations, including using route summarization, to ensure efficient traffic routing and minimal latency.
03	Apparition of pic values	High utilization of network resources	Check if network devices (router, switch,...) transit to much traffic.
		High utilization of hardware resources	Check application/services resources (memory, cpu, ...) utilization

## 7 TWAMP protocol

Table 13: Issues on twamp protocol latency measurements

N.	Issue description	Origin of issue	Suggestion
01	No displayed data	Agent or/and reflector apps in container not working	Restart apps in container or restart the entire container
		DNS Problems impacting the http requests	Check agent/reflector hosts network configuration
		Reflector web server not working	Check the web server service in reflector container or restart the container
		Port tcp 862/12862 and udp from 12800 to 12819 blocked	Check the firewall service and opens these tcp and udp ports used by the twamp protocol, to communicate between reflector/agent and agent/analyzer.
02	Higher values than usual for a long period	High server load	Check if twamp server in the reflector side is overused
		Proximity and Routing problem	Check the physical distance between the two end points, as well as the routing path taken by data packets.
		Quality of Service (QoS) Issues	Implement QoS policies to prioritize critical network traffic, make sure that latency-sensitive applications receive the necessary bandwidth.
		Firewall and Security Device issue	Optimize security policies and configurations in firewalls and security devices to reduce processing delays while maintaining security
		Buffering Issues	Check network devices (router, switch) as this issues may come from various point of the network when buffer become full or are misconfigured
		Jitter issue	Check the network as an inconsistent network conditions or variations in packet delivery times can result in increased latency.
04	Higher values in a short period	Saturation of Network Links	Implement load balancing to distribute traffic efficiently and prevent overload on specific servers or network paths.
		Network Routing Issues	Optimize routing configurations, including using route summarization, to ensure efficient traffic routing and minimal latency.
03	Apparition of pic values	High utilization of network resources	Check if network devices (router, switch,...) transit to much traffic.
		High utilization of hardware resources	Check application/services resources (memory, cpu, ...) utilization