

Corrigendum to the Pre-Bid Queries , Technical Specifications , to the RFP Procurement of Network Gateway Security Products, Implementation & Management.
(Next Generation Firewall Solution, Sandbox Solution, DNS Security etc.) Ref: LIC-CO/IT-BPR/FW/RFP/2022-23/01 Dated: 21/10/2022

Sr. No.	RFP Document Reference(s) (Section & Page Number)	RFP Clause	Pre-bid Queries	Response
2	General Requirements (1.9)	The proposed appliance must natively support (without breakout) 8 x 1G Copper & 4 x 10G SFP+ Ports from day one. The 1G Copper ports should also support 10SFP+ transceivers and the 10SFP+ ports should support 1G Copper ports. The appliance should have 2 x 40/100G QSFP ports. Management, Sync, HA etc ports should be additional. All the modules and transceivers should be provided from day one. (12x1G Copper, 12x10G SFP, 2x40/100G QSFP in addition to the management, sync and HA ports.	<p>Please relax this clause as 100G interfaces are not generally used on a device throughput of 10Gbps. The number of ports asked are substantially quite high as compared to the expected throughput of 10Gbps. This is not an approach as the throughput will always be the bottleneck.</p> <p>Request LIC team to amend the interfaces as the following: 1. 8x1G Copper (excluding management, sync & console) 2. 4x10G SFP+ (Slot 1) 3. 4x10G SFP+ (Slot 2) 4. 4x10G SFP+ (Slot 3)</p> <p>Additional 2x40/100G interfaces (per slot) can be accommodated by replacing the existing network interfaces cards.</p>	Please refer to the revised technical specifications
3	General Requirements (1.10)	Firewall Appliance should have a feature of holding multiple OS images to support resilience & easy rollbacks during the version upgrades	<p>1. Check Point has a different workflow here, the solution takes a snapshot (backup of configuration along with the OS) before version upgrades to have it auto-rollback in case of any issues identified while upgrading. 2. The same Snapshot can be stored externally on another storage 3. The solution has a feature named pre-upgrade verifier which verifies the problem / compatibility of the hotfixes / OS on the current platform and showcases the result to have a seamless & successful upgrade.</p> <p>Requesting LIC team to kindly acknowledge and accept this approach as compliant.</p>	Please refer to the revised technical specifications
4	Threat Prevention Features (6.12)	Solution should be able to passively detect endpoints and infrastructure for threat correlation and Indicators of Compromise (IoC) intelligence	This point focuses more on endpoint needs. Requesting LIC team to remove it and keep it specific to Network Firewalls only.	Please refer to the revised technical specifications
5	Management & Reporting (10.3)	Solution should support minimum 6TB of usable storage space for logs and reporting along with RAID-6 redundancy	<p>We will recommend storing the logs on external device instead on the management server to increase its capabilities OR instead go ahead with a software based option as it is the recommended industry practice to tweak the hardware parameters as per LIC's requirement and is very flexible.</p> <p>Requesting LIC team to amend it to below: The management server can be quoted as a software management so that LIC team has the control on tweaking the specifications as and when required.</p>	Please refer to the revised technical specifications
6	General Requirements - 1.12	The OEM must provide minimum 3 reference customer of same hardware & product model in India.	<p>Considering that the Firewall has to be available with 6 years of support, we would be proposing the latest generation of firewall. Hence we request you to consider the clause as below. "The OEM must provide minimum 3 reference customer of same / similar / higher hardware model in India."</p>	Please refer to the revised technical specifications
7	Performance - 2.1	The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. The performance must be based on HTTP traffic with a packet size of 1024 B. The claim has to be supported by publicly available documents published prior to the date of this RFP. The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable.	<p>Throughput consideration in terms of packet size and protocol should be similar for both Perimeter and Core firewall as same application traffic will pass through both tiers of firewall. Considering different benchmarks for sizing Perimeter and Core firewall may lead to variance in firewall performance at both tiers. Public document contain throughput based on enterprise mix of traffic and not HTTP 64K with all the features enabled. We can provide the undertaking on for the throughput.</p> <p>Request to change the clause as "The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. The performance must be based on HTTP traffic with a packet size of 64K. The claim has to be supported by publicly available documents published prior to the date of this RFP or OEM undertaking on Letterhead. The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable."</p>	Please refer to the revised technical specifications
8	Performance - 2.1	The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. The performance must be based on HTTP traffic with a packet size of 1024 B. The claim has to be supported by publicly available documents published prior to the date of this RFP. The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable.	<p>The clause mentions throughput requirement of 10Gbps with ingress throughput of 10Gbps and outgress throughput of 10Gbps simultaneously.</p> <p>The firewall is sized based on the total throughput of the appliance. Irrespective of the direction, traffic will hit and be processed by the CPU of the firewall.</p> <p>Request you to confirm if the throughput should be considered at 20Gbps (aggregation of ingress + outgress traffic).</p>	Please refer to the revised technical specifications
9	High Availability - 3.14.5	The Firewall must support (redundant) Field replaceable (FRU) and hot swappable AC power supply and Hot swappable FAN. It must be supplied with both the Indian as well as European standard compatible power cords.	<p>The proposed firewall will have in-built redundant FANs to ensure that the internal components are provided sufficient cooling and resiliency to failure. It does not give any additional benefit from a hardware standpoint.</p> <p>Request you to modify the clause as " The Firewall must support (redundant) Field replaceable (FRU) and hot swappable AC power supply and redundant FAN. It must be supplied with both the Indian as well as European standard compatible power cords..</p>	Please refer to the revised technical specifications

10	Threat Prevention - 6.4	The Proposed Solution should support over 40K IPS Signature.	It is important for the solution to have effective security instead of relying on the number of IPS signatures. Similar criteria should be considered for Core firewall as considered for Perimeter firewall. Request to rephrase the clause inline to the perimeter firewall specification as following "Security effectiveness should be certified by NSS and should be more than 98.5%. In case NSS Lab reports are not published in the last two years prior to the date of this RFP, the OEM should have AAA rating published by Cyber rating report in 2021 ."	Please refer to the revised technical specifications
11	Management & Reporting - 8.4	The solution has to provide for taking backups encrypted in SHA-256 format.	Every vendor uses different encryption methods to encrypt the backup files. We support AES-128. Request you to rephrase the clause as "The solution has to provide for taking backups in encrypted in SHA-256 / AES/128 format."	Please refer to the revised technical specifications
12	Management & Reporting - 8.20	Management solution should also have the following operational capabilities: i. Unused Rules Calculation for specific time period based on Firewall Traffic Logs. ii. Analysis on Covered/Shadow/Hidden Rules iii. Analysis on Rules Consolidation (Merging of similar kind of rules) iv. Analysis on Redundant Rules v. Tightening of Overly Permissive Rules (Any-Any) vi. Analysis on Unattached/Unused Objects to simplify objects management vii. Analysis on Rule-Reordering to improve the performance of the Firewall viii. Analysis on Disabled/Expired Rules for enhanced visibility on the Firewall Rules sets	Features like Rule consolidation, overly permissive rule and rule reordering are supported by single OEM. Request you to remove these points from the requirement.	Clause Deleted
13	Management & Reporting - 8.31	Solution must support adding exceptions to IPS enforcement from the log record	As log access is available with different levels of administrator, this feature can lead to security concerns if IPS exceptions are added which can lead to bypassing of genuine attacks. Request you to remove this clause.	Clause Deleted
14	1.9	The proposed appliance must natively support (without breakout) 8 x 1G Copper & 4 x 10G SFP+ Ports from day one. The 1G Copper ports should also support 10 SFP+ transceivers and the 10 SFP+ ports should also support 1 G Copper ports .The appliance should have 2 x 40/100G QSFP ports. Management, sync, HA etc ports should be additional. All the modules and transceivers should be provided from day one. (12x1 GCopper , 12x10G , 2x40/100G QSFP in addition to the management , sync and HA ports	Requesting you to change the clause as "The 1G Copper ports should also support 10 SFP+ transceivers and the 10 SFP+ ports should also support 1 G Copper ports (Optional or at least for 50% ports)" Since interchanging the transceivers on all ports might not needed. (8x10Gb transceivers can accommodate 4x1GB copper)	Please refer to the revised technical specifications
15	8.22	Solution must have the granularity of administrators that works on parallel on same policy without interfering each other	Working parallel on same policy can result in conflict of the policy and the policy deployment might not be reflecting the latest changes. Hence requesting to remove this clause	Clause Deleted
16	2.1	The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. The performance must be based on HTTP traffic with a packet size of 1024 B . The claim has to be supported by publicly available documents published prior to the date of this RFP. The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable.	Request to mention the exact throughput value. Ingress & Egress calculation is confusing as the minimum throughput is 10GB then Ingress & Egress should be 5GB. We calculate throughput based on Incoming ingress traffic plus Incoming Egress traffic. Request to clarify this. Request to change the performance on TCP-IP	Please refer to the revised technical specifications
17	Management & Reporting - 8.20	Management solution should also have the following operational capabilities: i. Unused Rules Calculation for specific time period based on Firewall Traffic Logs. ii. Analysis on Covered/Shadow/Hidden Rules iii. Analysis on Rules Consolidation (Merging of similar kind of rules) iv. Analysis on Redundant Rules v. Tightening of Overly Permissive Rules (Any-Any) vi. Analysis on Unattached/Unused Objects to simplify objects management vii. Analysis on Rule-Reordering to improve the performance of the Firewall viii. Analysis on Disabled/Expired Rules for enhanced visibility on Firewall Rules sets	There are dedicated tools available which has these requirements as a part of their use cases and many additional features over it. Bidder requests LIC team to remove this point and have this covered under dedicated tools.	Clause Deleted
18	1.9	The proposed appliance must natively support (without breakout) 8 x 1G Copper & 4 x 10G SFP+ Ports from day one. The 1G Copper ports should also support 10 SFP+ transceivers and the 10 SFP+ ports should also support 1 G Copper ports .The appliance should have 2 x 40/100G QSFP ports. Management, sync, HA etc ports should be additional. All the modules and transceivers should be provided from day one. (12x1 GCopper , 12x10G , 2x40/100G QSFP in addition to the management , sync and HA ports	Requesting you to change the clause as "The 1G Copper ports should also support 10 SFP+ transceivers and the 10 SFP+ ports should also support 1 G Copper ports (Optional or at least for 50% ports)" Since interchanging the transceivers on all ports might not needed. (8x10Gb transceivers can accommodate 4x1GB copper)	Please refer to the revised technical specifications
19	8.22	Solution must have the granularity of administrators that works on parallel on same policy without interfering each other	Working parallel on same policy can result in conflict of the policy and the policy deployment might not be reflecting the latest changes. Hence requesting to remove this clause	Clause Deleted
20	2.1	The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. The performance must be based on HTTP traffic with a packet size of 1024 B . The claim has to be supported by publicly available documents published prior to the date of this RFP. The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable.	Request to mention the exact throughput value. Ingress & Egress calculation is confusing as the minimum throughput is 10GB then Ingress & Egress should be 5GB. We calculate throughput based on Incoming ingress traffic plus Incoming Egress traffic. Request to clarify this. Request to change the performance on TCP-IP	Please refer to the revised technical specifications
21	7.2	The proposed firewall must define QoS traffic classes with: guaranteed bandwidth , maximum bandwidth , priority queuing & The proposed firewall must support real-time bandwidth statistics of QoS classes.	The proposed firewall must define QoS traffic classes with bandwidth rate limiting	Please refer to the revised technical specifications
22	2.5	Firewall should support minimum of 2 and scale upto 4 security context or firewall should support creation of at least two firewall instances which should be scalable to 4.	Optionally the Firewall should support minimum of 2 and scale upto 4 security context or firewall should support creation of at least two firewall instances which should be scalable to 4.	Please refer to the revised technical specifications
23	8.2	Management solution should also have the following operational capabilities: i. Unused Rules Calculation for specific time period based on Firewall Traffic Logs. ii. Analysis on Covered/Shadow/Hidden Rules iii. Analysis on Rules Consolidation (Merging of similar kind of rules) iv. Analysis on Redundant Rules v. Tightening of Overly Permissive Rules (Any-Any) vi. Analysis on Unattached/Unused Objects to simplify objects management vii. Analysis on Rule-Reordering to improve the performance of the Firewall viii. Analysis on Disabled/Expired Rules for enhanced visibility on the Firewall Rules sets	Management solution should also have the following operational capabilities: i. Rule-Reordering to improve the performance of the Firewall ii. Analysis on Disabled/Expired Rules for enhanced visibility on the Firewall Rules sets	Clause Deleted
24	8.4	The solution has to provide for taking backups encrypted in SHA-256 format.	The solution has to provide for taking external backups in SHA-256 format.	Please refer to the revised technical specifications

25	Performance - 2.1	The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. The performance must be based on HTTP traffic with a packet size of 1024 B. The claim has to be supported by publicly available documents published prior to the date of this RFP. The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable.	<p>Query-1- Throughput consideration in terms of packet size and protocol should be similar for both Perimeter and Core firewall as same application traffic will pass through both tiers of firewall. Considering different benchmarks for sizing Perimeter and Core firewall may lead to variance in firewall performance at both tiers. Public document contains throughput based on enterprise mix of traffic and not HTTP 64K with all the features enabled. We can provide the undertaking on letterhead for the throughput.</p> <p>Query-2- Public document contains throughput based on enterprise mix of traffic and not HTTP 64K with all the features enabled. We can provide the undertaking on for the throughput. Request to change the clause as "The proposed solution must provide minimum 10 Gbps of throughput (i.e. it should support 10 Gbps of ingress traffic and 10 Gbps of outgress traffic simultaneously) with all threat prevention features turned on. <u>The performance must be based on HTTP traffic with a packet size of 64K. The claim has to be supported by publicly available documents published prior to the date of this RFP or OEM undertaking on Letterhead.</u> The performance requirement is for a single hardware appliance and should not be for a cluster. Cluster based solutions will not be acceptable."</p>	Please refer to the revised technical specifications
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29		Solution should support minimum 6TB of usable storage space for logs and reporting along with RAID-6 redundancy	Bidder suggests storing the logs on external device instead on the management server to increase it capabilities OR instead go ahead with a software based option as it is the recommended industry practice to tweak the hardware parameters as per LIC's requirement and is very flexible. Bidder requests LIC team for the following change: The management server can be quoted as a software management so that LIC team has the control on tweaking the specifications as and when required.	Please refer to the revised technical specifications