

**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
1	General Requirements (1.10)	Firewall Appliance should have a feature of holding multiple OS images to support resilience & easy rollbacks during the version upgrades	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. Requesting LIC team to kindly acknowledge and accept this approach as compliant.	Please refer to the revised technical specifications
2	Performance (2.6)	The proposed appliance must have 256 GB of RAM from day one	Request relaxation to reduce it to 128GB or removal of this clause, this will enable us to quote.	Please refer to the revised technical specifications
3	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
4	Management & Reporting (8.3)	Solution should support minimum 10TB of usable storage space for logs and reporting along with RAID-6 redundancy	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. 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.	Please refer to the revised technical specifications
5	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. We would request LIC team to remove this point and have this covered under dedicated tools.	Clause Deleted
6	General Requirements - 1.12	The OEM must provide minimum 3 reference customer of same hardware & product model in India.	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."	Please refer to the revised technical specifications
7	Performance - 2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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.	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 for the throughput. Request to change the clause as "The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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."	Please refer to the revised technical specifications
8	Performance - 2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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.	The clause mentions throughput requirement of 30Gbps with ingress throughput of 30Gbps and outgress throughput of 30Gbps simultaneously. 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. Request you to confirm if the throughput should be considered at 60Gbps (aggregation of ingress + outgress traffic).	Please refer to the revised technical specifications

9	2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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 30GB then Ingress & Egress should be 15GB. 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
10	2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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 30GB then Ingress & Egress should be 15GB. 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
11	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
12	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
13	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
14	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
15	2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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 30GB then Ingress & Egress should be 15GB. 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
16	8.3	Solution should support minimum 10 TB of usable storage space for logs and reporting along with RAID-6 redundancy.	Request to change to "Solution should support minimum 10 TB of storage space for logs and reporting along with RAID-6 redundancy."	Please refer to the revised technical specifications
17	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
18	1.9	The proposed appliance must natively support (without breakout) 8 x 1G Copper & 8 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 100G QSFP ports. Management, sync, HA etc ports should be additional. All the modules and transceivers should be provided from day one. (16x1 G Copper , 16x10G SFP , 2x100G 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 be needed. (8x10Gb transceivers can accommodate 4x1G copper)	Please refer to the revised technical specifications
19		Firewall Appliance should have a feature of holding multiple OS images to support resilience & easy rollbacks during the version upgrades	Bidder requests LIC to consider alternate methods of Snapshot based backups and autorollbacks in case of any issues identified while upgrading. This can be stored externally also in another storage . Pre-upgrade verification mechanism verifies the problem / compatibility of the hotfixes / OS on the current platform and showcases the result to have a seamless & successful upgrade. Requesting LIC team to kindly acknowledge and also accept this approach as compliant.	Please refer to the revised technical specifications

20	Performance (2.6)	The proposed appliance must have 256 GB of RAM from day one	Bidder requests relaxation to reduce it to 128GB	Please refer to the revised technical specifications
21	Threat Prevention Features (6.12)	Solution should be able to passively detect endpoints and infrastructure for threat correlation and Indicators of Compromise (IoC) intelligence	Bidder understands that this point focuses more on endpoint needs. Requesting LIC team to delete the clause and keep it specific to Network Firewalls only	Please refer to the revised technical specifications
22	2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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 30GB then Ingress & Egress should be 15GB. 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
23	8.3	Solution should support minimum 10 TB of usable storage space for logs and reporting along with RAID-6 redundancy.	Request to change to "Solution should support minimum 10 TB of storage space for logs and reporting along with RAID-6 redundancy."	Please refer to the revised technical specifications
24	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
25	1.9	The proposed appliance must natively support (without breakout) 8 x 1G Copper & 8 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 100G QSFP ports. Management, sync, HA etc ports should be additional. All the modules and transceivers should be provided from day one. (16x1 G Copper , 16x10G SFP , 2x100G 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 be needed. (8x10Gb transceivers can accommodate 4x1GB copper)	Please refer to the revised technical specifications
26	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
27	2.6	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
28	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
29	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
30	Performance - 2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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.	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. 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 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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."	Please refer to the revised technical specifications
31	Performance - 2.1	The proposed solution must provide minimum 30 Gbps of throughput (i.e. it should support 30 Gbps of ingress traffic and 30 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.	The clause mentions throughput requirement of 30Gbps, with ingress throughput of 30Gbps and outgress throughput of 30Gbps simultaneously. 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. Request you to confirm if the throughput should be considered at 60Gbps (aggregation of ingress + outgress traffic)?	Please refer to the revised technical specifications

32	Threat Prevention - 6.4	The Proposed Solution should support over 40K IPS Signature.	<p>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.</p> <p>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 /22 ."</p>	Please refer to the revised technical specifications
33	Threat Prevention 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