Request for Proposal (RFP) for Selection of Vendor for Provision of Dedicated Cloud Services & Video Analytics Capability
RFP Reference: IHMCL/CSP/2021/01 Published on dated 04 August 2021
Pre-bid Query Response by IHMCL published on dated 18 August 2021

S. No.	Ref to RFP (Clause, Page no.)	Original Clause of RFP	Clarification Sought	Response by IHMCL
1	12	IHMCL invites proposals / bids from Cloud Service Providers herein referred to as CSPs who are STQC audited and empaneled with Ministry of Electronics and Information Technology (MeitY), Government of India	We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Prime Bidder and CSP's to offer cloud services as a Cloud Service Provider (CSP) for IHMCL requirement as per this RFP. As per MeitY's guidelines for procurement of cloud services, Government Department / Agency will procure cloud services from MSP when it does not have an Implementing Agency/Internal IT Team/expertise that is responsible for managing Cloud resource. In this case, they procure the Cloud services from MSP who will be responsible for managing the Cloud service offerings.oIn this scenario, the Government Department / Agencyhave a suite of legacy applications and /or plans to implement new solutions ORoThe Government Department / Agency have already identified an application CSPs offer cloud services in an on-demand and "self-service" model. Customers can provision virtual machines, storage and other cloud services as required, configure security controls and monitor / manage their virtual private cloud environment (through AWS Management Console) deployed on cloud without any dependency from the CSP. For customers who need help in managing the cloud services environment, CSPs have multiple partners (Managed Service Provider (MSPs)) to manage cloud environments on behalf of the customer. Several RFPs released by various Government Ministries and PSUs (eg. BPCL, GSTN, DGCA, DGFT, etc.) have provision for the bidder to be the MSP offering cloud from MeitY Empaneled CSPs. We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Bidder delivering end-to-end services for MECL and allow the bidder to provide CSP's empanelment certification, security certification (ISO 27001, ISO 27017, SOC1,..), compliance to CSP's technical requirements We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Prime Bidder and CSP's to offer cloud services as a Cloud Service Provider (CSP) for IHMCL requirement as per this RFP.	No Change, provision of RFP shall prevail
2	13	The bidder must be a Cloud Service Provider(s) empaneled with MEITY, GoI as on release date of this RFP	We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Prime Bidder and CSP's to offer cloud services as a Cloud Service Provider (CSP) for IHMCL requirement as per this RFP. As per MeitY's guidelines for procurement of cloud services, Government Department / Agency will procure cloud services from MSP when it does not have an Implementing Agency/Internal IT Team/expertise that is responsible for managing Cloud resource. In this case, they procure the Cloud services from MSP who will be responsible for managing the Cloud service offerings.oIn this scenario, the Government Department / Agencyhave a suite of legacy applications and /or plans to implement new solutions ORoThe Government Department / Agency have already identified an application CSPs offer cloud services in an on-demand and "self-service" model. Customers can provision virtual machines, storage and other cloud services as required, configure security controls and monitor / manage their virtual private cloud environment (through AWS Management Console) deployed on cloud without any dependency from the CSP. For customers who need help in managing the cloud services environment, CSPs have multiple partners (Managed Service Provider (MSPs)) to manage cloud environments on behalf of the customer. Several RFPs released by various Government Ministries and PSUs (eg. BPCL, GSTN, DGCA, DGFT, etc.) have provision for the bidder to be the MSP offering cloud from MeitY Empaneled CSPs. We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Bidder delivering end-to-end services for MECL and allow the bidder to provide CSP's empanelment certification, security certification (ISO 27001, ISO 27017, SOC1,..), compliance to CSP's technical requirements We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Prime Bidder and CSP's to offer cloud services as a Cloud Service Provider (CSP) for IHMCL requirement as per this RFP.	No Change, provision of RFP shall prevail
3	43	Selected CSP shall migrate the servers	Implementation would be done by the MSP/SI	No Change, provision of RFP shall prevail
4	43	Ensure 99.99 percent uptime, secure access & backup and restore recovery abilities	CSPs provides SLA for specific services. Please specify what are the services to be provisioned.	The uptime of Cloud Services provided by bidder should have 99.99 percent uptime

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5	53	The CSP should ensure that all the documentation required for smooth transition (in addition to the documentation provided by the CSP) are kept up to date and all such documentation is handed over to IHMCL during regular intervals as well as during the exit management process.	Bidder/MSP to ensure the documentation is completed.	No Change, provision of RFP shall prevail
6	Page No.12, Under Eligibility Criteria , Point -1	"The bidder must be a Cloud Service Provider(s) empaneled with MEITY, GoI as on release date of this RFP."	The given eligibility in RFP is as per Managed Service Provider (MSP), we hence request you to please remove the CSP work & allow us participate in this bid.	No Change, provision of RFP shall prevail
7	Page No.12, Under eligibility Criteria, Point-2	" The Bidder should have successfully completed at least one project involving Cloud based IaaS including application and data Migration from Physical to Virtual environment (P2V), implementation, supply of supporting software and Facility Management System (FMS) support during the last ten years	We are IT service provider since 7 years specialized in IT Cloud, Suppliying all types of software license. Azure Clouds, Data analytics, etc. we request you to please give us relaxation on years of experience from 10 years to 7 years	No Change, provision of RFP shall prevail
8	12	IHMCL invites proposals / bids from Cloud Service Providers herein referred to as CSPs who are STQC audited and empanelled with Ministry of Electronics and Information Technology (MeitY), Government of India	Since IHMCL is looking for procuring end-to-end services where scope of the bidder includes: Migration, Managed Services, O&M Services, we request IHMCL to allow Managed Service Providers to bid for this project. Allowing MSPs to be the bidders and offer cloud services from MeitY empanelled CSPs can increase the number of bidders significantly and allows for a true price discovery for MECL. Several RFPs released by various Government Ministries and PSUs (eg. BPCL, GSTN, DGCA, DGFT, etc.) have provision for the bidder to be the MSP offering cloud from MeitY Empanelled CSPs. We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Bidder delivering end-to-end services for MECL and allow the bidder to provide CSP's empanelment certification, security certification (ISO 27001, ISO 27017, SOC1,..), compliance to CSP's technical requirements	No change, provision of RFP shall prevail
9	13	The bidder must be a Cloud Service Provider(s) empanelled with MEITY, GoI as on release date of this RFP	Bidder should propose a CSP who is empanelled with MeitY Since IHMCL is looking for procuring end-to-end services where scope of the bidder includes: Migration, Managed Services, O&M Services, we request IHMCL to allow Managed Service Providers to bid for this project. Allowing MSPs to be the bidders and offer cloud services from MeitY empanelled CSPs can increase the number of bidders significantly and allows for a true price discovery for MECL. Several RFPs released by various Government Ministries and PSUs (eg. BPCL, GSTN, DGCA, DGFT, etc.) have provision for the bidder to be the MSP offering cloud from MeitY Empanelled CSPs. We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Bidder delivering end-to-end services for MECL and allow the bidder to provide CSP's empanelment certification, security certification (ISO 27001, ISO 27017, SOC1,..), compliance to CSP's technical requirements	No Change, provision of RFP shall prevail
10	43	Selected CSP shall migrate the servers	Implementation would be done by the MSP/SI	No Change, provision of RFP shall prevail
11	43	Ensure 99.99 percent uptime, secure access & backup and restore recovery abilities	CSPs provides SLA for specific services. Please specify what are the services to be provisioned.	The uptime of Cloud Services provided by bidder should have 99.99 percent uptime
12	12	The Bidder should have successfully completed at least one project related with Capture and hosting of video feed and Usage of video analytics for counting / classification during the last ten years prior to the submission of the bid in India, for any government or public authority.	The Purchase orders will clearly have only the cloud hosting BoQ but not the application being hosted on the PO or Work order. Requesting to provide relaxation on this clause.	No Change, provision of RFP shall prevail

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13	Page No. 84 **Annexure 9: Format for Financial Proposal**	Annexure 9: Format for Financial Proposal (To be submitted on in the excel format uploaded on the website)	As commercial excel format is not available on the e-tender portal, So please confirm the format in which we should submit the commercial proposal.	Refer Corrigendum-1
14	Page No. 75 **Annexure 4: Bidder's Annual Turnover – Statutory Auditor or CA Certificate**	Annexure 4: Bidder's Annual Turnover – Statutory Auditor or CA Certificate	We have the certificate from CA which contains the data of Turnover, Net Profit Before and After Tax and Net worth of last three years. So, please confirm whether we can submit the format that we have or the format that is mentioned in the tender document.	The bidder needs to submit the Annexures as per format provided in RFP.
15	Eligibility / Pre-Qualification criteria, page. 12	The Bidder should have successfully completed at least one project related with Capture and hosting of video feed and Usage of video analytics for counting / classification during the last ten years prior to the submission of the bid in India, for any government or public authority.	Kindly confirm the meaning of capture here, CSP will only responsible for the hosting part capturing of data will be done through specific application provided by application vendor.	No Change, provision of RFP shall prevail
16	Server Requirement Page. 45	Database Server	Kindly provide database version and edition for mentioned database instances in requirement sheet.	No change, provision of RFP shall prevail
17	Scope Overview Page. 43	Ensure 99.99 percent uptime, secure access & backup and restore recovery abilities	The following Feature is available with very 1 or 2 CSPs. Hence to have healthy competition and more CSP options, we request authority to ammend this clause as "Ensure 99.95 percent uptime, secure access & backup and restore recovery abilities"	The uptime of Cloud Services provided by bidder should have 99.99 percent uptime
18	Scope Overview Page. 43	The virtual machines (application servers) should be configured in separate availability zone.	As per the said clause, department has asked for the specefic services which are available with limited number of CSP hence we will request department to neutralize the said clause so that other CSP can also propose the asked services.	No change, provision of RFP shall prevail
19	Scope Overview Page. 43	The Successful bidder shall be responsible for provisioning of adequate Internet Bandwidth and connectivity to fetch data from NPCI through leased line connectivity. The cost for connectivity shall be borne by successful bidder.	please specify required unmetered internet bandwidth? (Mbps)	4 Mbps
20	6.3.2.1.1. Software defined element Page 47	Hybrid Cloud Workload Migration – There should also be provision to integrate existing DB hosted on IHMCL premises with the Application servers hosted in cloud environment through a Private/Public connectivity. CSP will provide access points / POP for the same.	Application and database on different premises will cause high latency issues and high bandwidth utilization, that will degrade the performance and will be costly, So we request authority to host application and database both on cloud to have better performance.	No Change, provision of RFP shall prevail
21	6.3.2.1.6. Back-up page 48	Backup solution should take consistent Application and Database backups	kindly confirm requierd backup space that need to considered.	The indicative requirement is mentioned in RFP, bidder need to be estimate on their own
22	6.3.2.1.7. Business Continuity Services Page 49	The CSP shall provide business continuity services in case the primary site becomes unavailable.	kindly specify the DR size it will be 100% or 50% of DC.	No Change, provision of RFP shall prevail
23	6.3.2.1.7. Business Continuity Services Page 49	The CSP shall provide business continuity services in case the primary site becomes unavailable.	Please share the expected daily data generation at DC site which would be replicated at DR site (Eg, GB/TB)	No Change, provision of RFP shall prevail

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24	6.3.2.1.7. Business Continuity Services Page 49	The CSP shall provide business continuity services in case the primary site becomes unavailable.	Kindly confirm no. of DR Drills required.(eg. 2 Drills yearly)	No Change, provision of RFP shall prevail
25	6.3.2.1.7. Business Continuity Services Page 49	The CSP shall provide business continuity services in case the primary site becomes unavailable.	Kindly specify how many public IPs are required at DC/DR	No Change, provision of RFP shall prevail
26	6.3.2.1.8. Security Requirements Page 50	Multi-Factor Authentication (MFA)	kindly specify No. of users requiring MFA ?	No Change, provision of RFP shall prevail
27	6.3.2.1.11. Monitoring Services page 49	CSP should provide service to have dedicated connectivity (Direct Connect) from on premise data center to cloud. And Direct Connect service should have flexibility to integrate/leverage ISPs MPLS connectivity.	Kindly specify how are the users going to connecting to DC/DR? (Internet/MPLS)	No Change, provision of RFP shall prevail
28	6.3.2.1.11. Monitoring Services page 50	CSP should provide service to have dedicated connectivity (Direct Connect) from on premise data center to cloud. And Direct Connect service should have flexibility to integrate/leverage ISPs MPLS connectivity.	how many links will be terminated at DC and DR?	No Change, provision of RFP shall prevail
29	6.3.2.1.11. Monitoring Services page 51	s. CSP should have provision to setup software VPN to support 5,000+ users.	kindly specify the number of VPN users require.	No Change, provision of RFP shall prevail
30	6.3.4.1.1. General specifications Page 56	The Cloud Service Provider must have connectivity of leading ISPs viz. BSNL/MTNL, Airtel, Vodafone, JIO, Idea, RCOM, Tata Teleservices, Railtel etc	The mentioned some ISP's has no feasibility in some area so to make this generic. we request authority to ammend this clause to The Cloud Service Provider must have connectivity of leading 3+ ISP's.	No Change, provision of RFP shall prevail. Post award of Contract, IHMCL shall notify the ISP in consultation with NPCI
31	6.3.4.1.8. Application Services Page 63	CSP should offer a search service in the Cloud that makes it simple and cost-effective to set up, manage, and scale a search solution for websites or applications	The following Feature is available with very few CSPs. Hence to have healthy competition and more CSP options, we request authority to not make the following feature mandatory	No change, provision of RFP shall prevail
32	6.8 Successful Bidder's Responsibility Page 68	To provide onsite support for the complete system	Kindly specify the qualification / designation /experience required for onsite resource.	Onsite support may not be required. However, the bidder is obligated to support IHMCL/Vendor appointed by IHMCL in case of any assistance required.
33	6.8 Successful Bidder's Responsibility Page 68	To provide onsite support for the complete system	Kindly specify the mentioned resource will work remotely or need deploy at onsite.	Onsite support may not be required. However, the bidder is obligated to support IHMCL/Vendor appointed by IHMCL in case of any assistance required.
34	6.8 Successful Bidder's Responsibility Page 68	To deploy adequate number of resources with qualifications and skills commensurate to the job requirement;	Kindly specify the qualification / designation /experience required for the resources	Onsite support may not be required. However, the bidder is obligated to support IHMCL/Vendor appointed by IHMCL in case of any assistance required.
35	page no 85 - form 1	Form 1-	Authority has specify separate compute for Application server in column - types of server and also in configuration section again vm wise break up is mentioned with separate compute.	Refer Corrigendum-1

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36	page no 85 - form 2	1. type of servers (column)	So authority to please elaborate the same and also specify which sizing is needs to take in consideration	Refer Corrigendum-1
37	12	IHMCL invites proposals / bids from Cloud Service Providers herein referred to as CSPs who are STQC audited and empaneled with Ministry of Electronics and Information Technology (MeitY), Government of India	As per MeitY's guidelines for procurement of cloud services, Government Department / Agency will procure cloud services from MSP when it does not have an Implementing Agency/Internal IT Team/expertise that is responsible for managing Cloud resource. In this case, they procure the Cloud services from MSP who will be responsible for managing the Cloud service offerings.oIn this scenario, the Government Department / Agencyhave a suite of legacy applications and /or plans to implement new solutions ORoThe Government Department / Agency have already identified an application CSPs offer cloud services in an on-demand and access self service model. Customers can provision virtual machines, storage and other cloud services as required, configure security controls and monitor / manage their virtual private cloud environment (through AWS Management Console) deployed on cloud without any dependency from the CSP. For customers who need help in managing the cloud services environment, CSPs have multiple partners (Managed Service Provider (MSPs)) to manage cloud environments on behalf of the customer. Several RFPs released by various Government Ministries and PSUs (eg. BPCL, GSTN, DGCA, DGFT, etc.) have provision for the bidder to be the MSP offering cloud from MeitY Empaneled CSPs. We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Bidder delivering end-to-end services for MECL and allow the bidder to provide CSP's empanelment certification, security certification (ISO 27001, ISO 27017, SOC1,..), compliance to CSP's technical requirements We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Prime Bidder and CSPâ€™s to offer cloud services as a Cloud Service Provider (CSP) for IHMCL requirement as per this RFP.	No Change, provision of RFP shall prevail
38	13	The bidder must be a Cloud Service Provider(s) empaneled with MEITY, GoI as on release date of this RFP	As per MeitY's guidelines for procurement of cloud services, Government Department / Agency will procure cloud services from MSP when it does not have an Implementing Agency/Internal IT Team/expertise that is responsible for managing Cloud resource. In this case, they procure the Cloud services from MSP who will be responsible for managing the Cloud service offerings.oIn this scenario, the Government Department / Agencyhave a suite of legacy applications and /or plans to implement new solutions OR The Government Department / Agency have already identified an application CSPs offer cloud services in an on-demand and â€œself-serviceâ€ model. Customers can provision virtual machines, storage and other cloud services as required, configure security controls and monitor / manage their virtual private cloud environment (through AWS Management Console) deployed on cloud without any dependency from the CSP. For customers who need help in managing the cloud services environment, CSPs have multiple partners (Managed Service Provider (MSPs)) to manage cloud environments on behalf of the customer. Several RFPs released by various Government Ministries and PSUs (eg. BPCL, GSTN, DGCA, DGFT, etc.) have provision for the bidder to be the MSP offering cloud from MeitY Empaneled CSPs. We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Bidder delivering end-to-end services for MECL and allow the bidder to provide CSP's empanelment certification, security certification (ISO 27001, ISO 27017, SOC1,..), compliance to CSP's technical requirements We would request IHMCL to allow Managed Service Partners (MSP) to participate in this bid as Prime Bidder	No Change, provision of RFP shall prevail
39	43	Selected CSP shall migrate the servers	Implementation would be done by the MSP/SI	No Change, provision of RFP shall prevail
40	43	Ensure 99.99 percent uptime, secure access & backup and restore recovery abilities	CSPs provides SLA for specific services. Please specify what are the services to be provisioned.	The uptime of Cloud Services provided by bidder should have 99.99 percent uptime

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41	53	The CSP should ensure that all the documentation required for smooth transition (in addition to the documentation provided by the CSP) are kept up to date and all such documentation is handed over to IHMCL during regular intervals as well as during the exit management process.	Bidder/MSP to ensure the documentation is completed.	No Change, provision of RFP shall prevail
42	45	Server Requirement - There are 11 servers in the line items but in architecture there are 9 servers. 2 DB servers but in architecture 1 DB is there	Please clarify	Refer Corrigendum-1
43	49	Point No. 14- Tapeless Back up	What another kind of back up are already in place	No change, provision of RFP shall prevail
44	49	Point No. g - Dedicated, Hardware-Based Crypto Key Storage Option for using Hardware Security Module (HSM) appliances	HSM is the another service of AWS. It is not shown in Architecture diagram	Refer Corrigendum-1
45	51	Point no. s - CSP should have provision to setup software VPN to support 5,000+ users.	How many Site to site VPN are required (Are there multiple locations)	No Change, provision of RFP shall prevail
46	12	Pt. No. 3 Relevant Project Experience 2 The Bidder should have successfully completed at least one project related with Capture and hosting of video feed and Usage of video analytics for counting / classification during the last ten years prior to the submission of the bid in India, for any government or public authority.	The configuration is more on the server side then this should be removed	No Change, provision of RFP shall prevail
47	6.3.4.1.1 General specs, Pg 56- Point 8 and 6.3.4.1.6, Security specs, Pg 62- Point 1	The CSP must have following certifications for their proposed facilities:- 1. SOC1 2. SOC2 3. ISO27001 CSP should meet a broad set of international and industry specific compliance standards: ISO 27001, ISO 27017, ISO 27018, SOC 1, SOC 2, and SOC 3.	There is ambiguity in these clauses, SOC 3 is missing from the CSP certifications clause. Request department to please get this added as SOC3 security compliance/certification is an important evaluation for CSP.	No Change, provision of RFP shall prevail
48	6.3.4.1.1 General specs, Pg 56- Point 9	New clause addition recommendation	Since DR is in scope of RFP and IHMCL would need the system up and running in case of any regional disaster, we would recommend IHMCL to add DR clause from MeiTY. Request to add the following clause to strengthen availability requirements in line with MeiTY guidelines **Clause should be** 'The Disaster Recovery Data Center should be at least 100 Km away from the Primary Data Center. DC & DR to be provided by the same cloud solution provider.'	No Change, provision of RFP shall prevail
49	6.3.4.1.1 General specs, Pg 56- Point 8	New clause addition recommendation	The suggested CSP certificate is important for the critical business requirements of DR. Please consider adding this clause. ISO 22301 - Business continuity management systems	No change, provision of RFP shall prevail
50	3.2 Eligibility / Pre-Qualification criteria Legal Entity Point No.1	The bidder must be a Cloud Service Provider(s) empanelled with MEITY, GoI as on release date of this RFP.	Most of reliable CSPs like Microsoft, Oracle, Google, AWS are participating though their Managed service providers. Hence we request you to allow MSPs to participate with CSP's authorization.	No Change, provision of RFP shall prevail

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51	3.2 Eligibility / Pre-Qualification criteria Relevant Project Experience-1 Point No.2	The Bidder should have successfully completed at least one project involving Cloud based IaaS including application and data Migration from Physical to Virtual environment (P2V), implementation, supply of supporting software and Facility Management System (FMS) support during the last ten years prior to the submission of the bid in India, for any government dept./PSU or public authority. P.S. – The supporting document should clearly highlight the relevant scope of work, contract value and year of execution.	We have done many similar projects of designing, developing applications and migrating workloads from On-premises to Cloud; however scope of work language is different. Hence we request you to make it generic yet relevant.	No Change, provision of RFP shall prevail
52	3.2 Eligibility / Pre-Qualification criteria Relevant Project Experience-2 Point No.3	The Bidder should have successfully completed at least one project related with Capture and hosting of video feed and Usage of video analytics for counting / classification during the last ten years prior to the submission of the bid in India, for any government or public authority. P.S. – The supporting document should clearly highlight the relevant scope of work, contract value and year of execution	We have done similar project of capturing video and perform analytics to extract meaningful information; however scope of work language is different. Hence we request you to make it generic yet relevant.	No Change, provision of RFP shall prevail
53	Page No- 42, Page number-46	point no. 6 Scope of Work, Page no-46, proposed architecture of TMCC	The RFP scope specifies for Integration between Various Business Applications(existing and future) and with **Dashboard & VMS**. This is better served with an Industry leading Enterprise ESB Solution outside the Integrated Dashboard & VMS for future-proof solution. Kindly confirm this requirement. As there are many TMCC wide applications that needs to be integrated with **Dashboard & VMS Control Room** with open standards, it is highly recommended to have a dedicated(separate) enterprise service bus architecture considering existing and future integrations scope. Allowing P2P connectors for every application would lead to P2P integration with its demerits and bottlenecks(less agility & flexibility, limited scalability, complex monitoring and manageability, compromised data security due to lack of central governance, higher TCO, higher risk, etc). **Request you to kindly specify separate Tejchnical Specifications for ESB for the Integration Software Platform as Suggested below.**	No Change, provision of RFP shall prevail
54	Page No- 51, Page number-67	Page no- 51 [CSP SLA specs], Page no-67 [SLA & Penalties]	RFP has provided lot of emphasis on SLA and Performance, To ensure Overall binding on SLA and avoid future risks please add the below "Kindly confirm that the bidder shall not propose any freeware software/community edition(built-in modules or complete software stack). As any such underlying freeware/community-edition would be a severe security and support risk."	No Change, provision of RFP shall prevail
55	Suggested Specification	Proposed Bill of Material	The RFP scope specifies for Integration between Various Business Applications(existing and future) and with **Dashboard & VMS.** This is better served with an Industry leading Enterprise ESB Solution outside the Integrated Dashboard & VMS for future-proof solution. Kindly confirm this requirement. As there are many TMCC wide applications that needs to be integrated with Dashboard & VMS Control Room with open standards, it is highly recommended to have a dedicated(separate) enterprise service bus architecture considering existing and future integrations scope. Allowing P2P connectors for every application would lead to P2P integration with its demerits and bottlenecks(less agility & flexibility, limited scalability, complex monitoring and manageability, compromised data security due to lack of central governance, higher TCO, higher risk, etc). **Request you to Kindly specify the Line Item for ESB in the Software Bill of Material to ensure that the Bidder provides a proper full-use enterprise ESB Product (Just as the way other software line items are specified)**	No Change, provision of RFP shall prevail

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56	Suggested Specification	General Requirement - Software	Kindly confirm that the bidder shall not propose any freeware software/community edition(built-in modules or complete software stack). As any such underlying freeware/community-edition would be a severe security and support risk.	No Change, provision of RFP shall prevail
57	Suggested Specification	General Requirement - **Operating System Technical Specificaitons**	RFP is suggesting to use one O/S, which is confiened to one OEM and restrictive. Request you to kindly add RHEL or add below specifications to minimise risk and future proof the solution from O/S perspective Operating System Technical Specifications – • Offered solution should be based on Open Standard and Open Architecture. The operating system should be offered with 24x7 support directly from the operating system OEM and it should have minimum one support centre in India for localised support. • Offered solution should have one-click security compliance tool that is designed to secure offered Operating System for Critical workloads. • It should be offered with predictive analytics tool to proactively check against\common vulnerabilities and exposures (CVEs), identify system misconfigurations, and provide guidance. • It should be offered with predictive analytics tool to proactively check against\common vulnerabilities and exposures (CVEs), identify system misconfigurations, and provide guidance. • The Linux operating system running in existing environment should be checked for security compliance to the security benchmark for Linux from the Centre for Internet Security (CIS) and the offered tool should have this capability. • Proposed Linux Operating system should have minimum 10 years of life cycle availability on major kernel versions. • Offered solution should be able to do Single click evaluation and remediation. Offered solution should be able to do Automatic security compliance - assessment and remediation. • Offered solution should be able to do Single click evaluation and remediation. Offered solution should be able to do Automatic security compliance - assessment and remediation. • All the required licenses/subscription should be provide for the solution. All the software update and patches should be provided during entire support period at no extra cost.	No Change, provision of RFP shall prevail
58	Suggested Specification	General Requirement - **Enterprise Service Bus Technical Specificaitons**	Request you to kindly add the below specifications to minimise risk and future proof the solution with respect to IOT platform as suggested in the architechture. Enterprise Service Bus Technical Specifications – 1 There should be no point to point integration in the architecture. There should be a separate enterprise service bus layer for integration 2 The enterprise service bus layer should be loosely coupled with any other component in the architecture. 3 Enterprise service bus layer should be independently scalable, modular and replaceable. It should follow scale-out architecture to handle spikes in traffic. 4 Enterprise service bus could be deployed on choice of environments - Bare Metal, VMs, containers, public and private cloud 5 ESB layer should have out of the box support OSGi bundles 6 Integration software should include out-of-the box support for Enterprise Integration Patterns and Standard Connectors without additional cost 7 Integration platform should include Message Queue capability 8 Should support leading industry standard protocol for interoperable reliable messaging with AMQP 1.0 and MQTT 9 Integration platform should include native management console to manage ESB & Message Queue OEM Should have support centre in India 10 OEM Should have support centre in India. 11 The OEM Software support of ESB Solution shall not restrict the number of support cases/incidents for both production and development.	No Change, provision of RFP shall prevail

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59	Page No- 66, point no- 6.4.1	Video Analytics Application	An open, adaptable AI/ML architecture will help you execute this process more effectively. This architecture requires several key technologies and capabilities: • **AI/ML and DevOps tools** allow data scientists, ML engineers, and application developers to create, deploy, and manage ML/DL models and applications. • **Data pipelines** provide cleaned data to data scientists for creating, training, and testing ML/DL models and to application developers for data management needs. • **A cloud platform** gives data engineers, data scientists, ML engineers, and application developers access to the resources they need to work rapidly. • **Compute, storage, and network accelerators** speed data preparation, model development, and inferencing tasks. • **Infrastructure endpoints** provide resources across on-site, virtual, edge, and private, public, and hybrid cloud environments for all stages of AI/ML operations. • **A containerized Environment** with well defined container management tool/system with following features: 1.Security, 2.Storage 3.Networking 4.Monitoring5. Backup 5.Multisite	No Change, provision of RFP shall prevail
60	Page No- 47, Cloud Based Storage Requirement	Cloud Based Storage Requirement	**Since storage is an integral and core part of the project, it has be robust and adhre to the architechtural guidelines mentioned in RFP. Requesting you to metion a detailed specifications for the Storage:** **Proposed storage solution should be a true software defined storage solution** Base architecture of the solution should be object based architetcure All the critical storage functionalities should come from the software itself and should not be dependent on the hardware The SDS should be capable of running on any industry standard x-86 based server hardware The SDS should be capable of abstracting any type of harddisk and should not locked down to few hardware vendors The SDS should support JBOD's The proposed SDS solution should have minimum (number) installations world wide The proposed solution should have support for a minimum of one deployment more than 30PB "The SDS vendor should have published reference architectures with hardware vendors containing best practices, recommendations and the document should be submitted along with the bid" The SDS should be able to scale vertically and horizontally in tens of peta bytes The SDS should be running on a secure and supported linux operating system The proposed SDS should be completely opensourced and supported by OEM vendors The SDS vendor should support subscription based pricing model The licensing/subscription should be based on consumed capacities The SDS vendor should have local presence and should have world wide 24/7 support All the feature functionalties should be in available with single licensing/subscription	No Change, provision of RFP shall prevail
61			Do we need to provide hosting services based out of India ?	No Change, provision of RFP shall prevail
62			Do vendor need to provide DR site for the Central real time monitoring solutions ?	No Change, provision of RFP shall prevail
63			Do let us know number of dashboard and report required and complexity of dashboard ?	No Change, provision of RFP shall prevail
64			Request to share the current volume of fleet crossing from different toll plaza across PAN India	No Change, provision of RFP shall prevail
65			Please share the current Infrastructure and application details required from migration	No Change, provision of RFP shall prevail
66			What is overall RTO and RPO looking for the solutions?	No Change, provision of RFP shall prevail
67			What is archival and retention policy ?	No Change, provision of RFP shall prevail
68			What is expected implementation timeline ?	No Change, provision of RFP shall prevail

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69			What are the number of workflow which need to be created (if any with complexity)?	No Change, provision of RFP shall prevail
70	6.3.3.1.1 Page 55	Migration of Existing Applications	Can you please specify how many applications need to be migrated. Is it only one or more?	No Change, provision of RFP shall prevail
71	6.3.2.1.4. page 49	High Availability & Redundancy	High Availability & Redundancy nrequired for DB and application or only of application please specify	No Change, provision of RFP shall prevail
72	6.3.3.1.1 Page 55	Migration of applications	Can you please specify how many applications need to be migrated. Is it only one or more?	The indicative requirement is mentioned in RFP
73	6.3.2.1.4. page 49	High Avalibility	High Availability & Redundancy nrequired for DB and application or only of application please specify	No Change, provision of RFP shall prevail
74			Hence, we request you to kindly allow and accept our partner's global experience certificate which will provide a fair chance and a good competition in the bid and they would also bring the best global practices which would in the interest of IHMCL.	No Change, provision of RFP shall prevail
75			Hence, we request you to kindly allow and accept our partner's global experience certificate which will provide a fair chance and a good competition in the bid and they would also bring the best global practices which would in the interest of IHMCL.	No Change, provision of RFP shall prevail
76	6.3.1 point#4 Page 46	Server Requirement	For Video Feed Server requirements Nvidia Tesla T4 is specified. Nvidia Tesla T4 GPU is an older chipset and do not have NVLINK. Please refer below link- https://en.wikipedia.org/wiki/Nvidia_Tesla In this context we would request if you allow latest chips from Nvidia like Ampere A 100, which enable much better performance & faster results and reduces core requirement. So, request to please allow CSP to propose newer GPU like Ampere A 100. A100 is the latest generation of processor, with higher FLOPs , purpose built for heavy GPU works. This help department to evaluate with competitive bid. Also confirm if you these GPUs are required 24*7*365 days.	No Change, provision of RFP shall prevail. The GPUs are requried on 24*7*365 basis.
77	6.3.1 point#4 Page 46	Server Requirement	Request to please provide details of Video Analytics Application vendor to understand deployment archiectcture keeping GPU into condiderations as core to processing.	No Change, provision of RFP shall prevail
78	6.3.1 point#4 Page 46	Server Requirement	Request to please confirm if all the storage mentioned in this section are SSD.	Requirement is already mentioned in RFP
79		Bid Submission extension	We expect clarification to reach us by early next week. We need to work on the same after we receive the clarifications. This is a complex bid we need to arrange credentials and work from the technical perspective from migration side also. Hence we request for at least 3 weeks extension	No Change, provision of RFP shall prevail
80	Page 57- 6.3.4 Cloud Computing Specifications	RPO<= 15 mins RTO<=1 hour	RPO to be 30 mins as per Meity guidelines RTO to be 4 hours as per Meity guidelines	The requirement of the RFP to be matched subject to guidelines issued by MEITY
81	6.6.2- Availability of Cloud Infra	The availability of the cloud infrastructure should be 99.95%.	We can offer upto 99.9% in HA, 99.5% in non-HA	No Change, provision of RFP shall prevail
82	6.3.4-Cloud Computing Specifications	For on premises IT Infrastructure ,Bidder should provide the minimum of 99.95 % Monthly SLA.	Kindly clarify the scope of on prem infra?	No Change, provision of RFP shall prevail
83	6. Scope of Work, Page No 43	Cloud-based Data Analytics Tool – Tool to process and carry out various analyses of highvolume data by using cloud computing.	As per the understanding CSP has to provide the underlaying platform such as Server, Storage , OS, Database, Security . Analytics software will be taken care by other Vendor. Please clarify	Yes

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84	6. Scope of Work, Page No 43	AI based Video Analytics Solution – AI software which can automatically count and classify the vehicles through the available video feeds.	As per the understanding CSP has to provide the underlaying platform such as Server, Storage , OS, Database, Security . Video Analytics software will be taken care by other Vendor. Please clarify	Yes
85	6. Scope of Work, Page No 44	The Successful bidder shall be responsible for provisioning of adequate Internet Bandwidth and connectivity to fetch data from NPCI through leased line connectivity. The cost for connectivity shall be borne by successful bidder.	Please let us know what does it mean with lease line connectivity. Does CSP need to provide the lease line , If Yes, Please share the location and size in Mbps and add the same in commercial format.	4 Mbps link to be provided for NPCI connectivity, the location details shall be shared with Successful bidder.
86	6. Scope of Work 6.3 Server Requirement, Page 46	**Application Servers** 8 vCPU 16 GB RAM, 100 GB Storage 4 vCPU 8 GB RAM, 100 GB Storage 4 vCPU 8 GB RAM, 100 GB Storage 16 vCPU 64 GB RAM 100 GB + 6.5 TB Storage 8 vCPU 32 GB RAM 100 GB + 6.5 TB Storage --- **Space – 1 TB SSD Core – 32 Core RAM – 64 GB** **OS – Ubuntu (Latest)**	Two different Configuration is mentioned 32 Core , 64 GB RAM / 5 VM, Which configuration need to considered for Application as well as database	No Change, provision of RFP shall prevail
87	6. Scope of Work 6.3 Server Requirement, Page 46	**Database Servers** 8 vCPU 32 GB RAM 100 GB + 500 GB Storage 8 vCPU 32 GB RAM 100 GB + 1 TB Storage --- **Space – 10 TB SSD Core – 20 Core RAM – 40 GB** **OS – Ubuntu (Latest), Access with SSH**	Please let us which database like MS SQL , MySQL and what is edition and version of database.	No Change, provision of RFP shall prevail
88	6. Scope of Work 6.3.2.1.8. Security Requirements, Page 50	b. Secure Access – Customer access points, also called API endpoints, to allow secure HTTP access (HTTPS) so that the departments can establish secure communication sessions with Cloud services using Secure Sockets Layer (SSL) / Transport Layer Security (TLS). d. Multi-Factor Authentication (MFA) g. Dedicated, Hardware-Based Crypto Key Storage Option for using Hardware Security Module (HSM) appliances n. Properly implementing anti-malware and host-based intrusion detection systems on their instances, as well as any required network-based intrusion detection systems. o. Conducting regular vulnerability scanning and penetration testing of the systems.	Below Security Component are Missing in Commercial BOQ: **HIPS (Host Intrusion Detection system),** **HSM (Hardware Security Module) BOX, VA/PT Scanning based on per IP ,** **MFA Multi Factor Authentication (for number of Internal users)** **SSL Cert for Secure HTTP Access ar**e missing in commercial Form, Please provide the clarity	No Change, provision of RFP shall prevail
89	6.3.3 Migration of Existing Applications	Migration of the Application Suite from the existing infrastructure to the cloud infrastructure as per the defined To-Be architecture. The migration shall also include the migration of underlying data & files from the current database(s) / storage into the database(s) / storage on the cloud.	As per the understanding, Migration of Application shall be done by Application Team of IHMCL. However, CSP will support in Migration of Server, Files and database based on the dependency analysis with IHMCL Application Team. Kindly clarify. Also, let us know size of the existing data to be migrated in TB. and incremental growth as well.	Refer Corrigendum-1
90	6.3.4.1.1. General specifications	RPO: <= 15 mins RTO: <= 1 hours	To Achieve the RPO/RTO as per MeiTY, We recommend to include the Dedicated P2P Link between DC-DR . However, Dedicated B/w is missing from DR section in Commercial BOQ.	No Change, provision of RFP shall prevail
91	5.6.4 Implementation Timelines, Page No.30	Provisioning of Video Analytics Service T + 3 days	Project required some dedicated component like GPU server, Storage, HSM, Security Like WAF, Firewall with IPS/IDS. These dedicated component have some dependency on Product OEM for hardware delivery. Request to Relax the Implementation time line as 3 Day is very stringent	Refer Corrigendum-1
92	Generic Queries	Incident Response solution/SOC	Please let us know if seucrity incident /Respond solution is required, As SIEM is not part of BOQ. If yes, then please let us retention time of incident logs offline, Online and number of device , server to be monitored as part of SIEM	No Change, provision of RFP shall prevail

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93	Indemnification	5.13.1 -The successful bidder shall indemnify, defend, save and hold harmless, IHMCL, NHAI and MoRTH and their officers, employees, servants, and agents (hereinafter referred to as the "IHMCL Indemnified Persons"), but excluding any service provider to IHMCL who develops, operates or maintains their proprietary solution on the infrastructure provided by the bidder, against any direct loss, damage, claims, cost and expense of whatever kind and nature (including without limitation, legal fees, claims and expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of or are based upon any order passed by any statutory authority including Courts, tribunals or other judicial/quasi-judicial authorities, on account of breach of the Successful Bidder's obligations under this Contract or any other related agreement or otherwise, any fraud or negligence attributable to the Successful bidder or its Agents under contract or tort or on any other ground whatsoever, all eventualities of theft, dacoity, robbery, etc., except to the extent that any such suits, proceedings, actions, demands and claims has arisen due to any breach or default of this Contract on the part of IHMCL Indemnified Persons. 5.13.2 -The Successful Bidder shall indemnify IHMCL Indemnified Persons from all legal obligations in respect of professionals deployed by the Successful Bidder. IHMCL Indemnified Persons shall also stand absolved of any liability on account of death or injury sustained by the Successful Bidder's workmen, staff/employees during the performance of their work and also for any damages or compensation due to any dispute between the Successful Bidder and its workmen, staff/ employees. 5.13.3 -In addition to the aforesaid, the successful bidder shall fully indemnify, hold	Bidder shall indemnify the Customer. However, the total aggregate liability shall not exceed 12 months of the charges received from the Customer under the specific purchase order giving rise to the liability. In case of any IPR infringement claim, the Bidder shall be liable to replace the infringed material with non infringed material and that shall be the sole and exclusive remedy for the customer. The Bidder will not be liable for any IPR claims.	No Change, provision of RFP shall prevail
94	Termination	ON BREACH OF CONTRACT: IHMCL may terminate the Contract if the Successful bidder causes a Fundamental Breach of the Contract. Fundamental Breach of Contract includes, but shall not be limited to, the following: a) The successful bidder fails to carry out any obligation under the Contract.	Customer shall have the right to terminate only in case of a material breach by the Bidder and in case the bidder fails to remedy the breach within the cure period.	No Change, provision of RFP shall prevail
95	Termination	c) The successful bidder without reasonable excuse fails to commence the work in accordance with relevant clauses.	Customer can terminate the agreement only in case there is a substantial delay from the bidder.	No Change, provision of RFP shall prevail
96	Compensation for Breach	a) Compensation for default by the Successful Bidder i. In the event of the Successful Bidder being in breach of this Contract, unless such default or delay is on account of Force Majeure, the Selected Bidder shall pay to IHMCL, by way of compensation, all direct costs suffered or incurred by the IHMCL as a consequence of such breach, within 30 days of receipt of the demand from the IHMCL. ii. Without limiting generality of the Clause 5.18.15 (i), the Successful Bidder shall pay to IHMCL by way of compensation, all direct costs suffered or incurred by IHMCL incurred as a result of any and all losses, claims, damages and liabilities (including, without limitation, legal fees and other expenses incurred in connection with any suit, action or proceeding or any claim asserted, as such fees and expenses are incurred), joint or several, that arise out of , or based upon: a) any untrue statement or misrepresentation of a material fact provided by the Successful Bidder or an omission to state a material fact required to be communicated. b) any non-performance or breach of the roles, responsibilities, representations, warranties, undertakings, and declarations contained herein by the Successful Bidder or its directors, employees, personnel or representatives, as the case may be. c) Negligence, fraud, or misconduct of the Successful Bidder or any of its employees, agents, affiliates or advisors.	Bidder shall in case of a breach only be liable for agreed liquidated damages. However, it shall not be liable to compensate the Customer. Kindly amend the clause accordingly.	No Change, provision of RFP shall prevail

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97	Limitation of Liability	5.18.16.1.1. The Successful Bidder's liability under this Contract shall be determined as per Applicable law. The Successful Bidder shall be liable to IHMCL for loss or damage occurred or caused or likely to occur on account of any act of omission on the part of the Successful Bidder its affiliates, subsidiaries, stockholders, subcontractors, suppliers, directors, officers, employees, assigns and agents, including loss caused to IHMCL on account of defect in goods or deficiency in services on the part of Successful Bidder or his agents or any person / persons claiming through or under said Successful Bidder. 5.18.16.1.2. Notwithstanding anything stated herein above, the liability for Successful bidder shall NOT exceed ten times the value of Performance Bank Guarantee amount. 5.18.16.1.3. This limitation of liability shall not affect Successful bidder's liability, if any, for direct loss or damage to Third Parties caused by Successful bidder or any person or company acting on behalf of Successful bidder in carrying out the Services. The Successful bidder is advised to take necessary measures, such as insurance, etc. to cover any direct loss or damages to third party impacted by the services of Successful bidder.	Bidder total aggregate liability shall not exceed 12 months of the charges received from the customer under the specific purchase order giving rise to the liability.	No Change, provision of RFP shall prevail