



Notice Inviting Expression of Interest (Eoi) for Empanelment of Domain Experts on Honorarium Basis for the C-DAC's Indigenous Sovereign Operating System Initiative

Notice Ref No: CDAC(C)/SSM/TE/2026-27/01

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1. Background and Context

The Centre for Development of Advanced Computing (C-DAC) is spearheading the **Indigenous Sovereign Operating System (OS) Initiative** as a strategic national programme to strengthen India's digital sovereignty through the development of indigenous operating system technologies. The initiative encompasses five OS variant categories, namely **General Purpose, Server, Embedded, Mobile, and High Performance Computing (HPC)**, and aims to develop technically robust, deployment-ready, secure, and internationally benchmarked specifications during the pre-investment and planning phase of the programme.

To provide strategic direction and technical oversight, a High-Level Committee has been constituted for the initiative. Supporting the Committee, an **Expert Committee of 5 Technical Domain experts** is proposed to function as the principal technical and strategic advisory body during the pre-investment and planning phases. The Expert Committee will provide continuous technical guidance, ensure architectural consistency across the various OS variants, evaluate technology options, contribute to standards and specifications, review technical deliverables, and assist in preparing comprehensive, execution-ready documentation.

In view of the highly specialized and multidisciplinary nature of the programme, C-DAC proposes to engage India based **distinguished domain experts from academia, research institutions, industry, open-source communities, and Government organizations** on an **honorarium basis**. The engagement is intended to leverage their expertise in operating systems, system architecture, security, virtualization, networking, embedded systems, mobile platforms, high-performance computing, software engineering, open-source ecosystems, and other related domains, thereby enabling the formulation of a technically sound and globally competitive roadmap for the Indigenous Sovereign Operating System Initiative.

Accordingly, C-DAC invites **Expressions of Interest (Eoi)** from eligible experts for empanelment and engagement as members of the Expert Committee on an honorarium basis.

2. Role and Position within the Committee Structure

The Expert Committee functions within a multi-tier governance structure established for the C-DAC's OS Initiative. Its position and inter-relationships are defined as follows:

Tier	Technical and Strategic Advisory Body (Tier II)
Reports to	Task Force Secretariat (TFS) and Task Force Committee
Interfaces with	Technical Working Groups and Certification Bodies
Operational Phase	Pre-Investment Phase and Planning Phase of the C-DAC's OS Initiative

The Expert Committee does not replicate the governance function of the Task Force. Rather, it provides the sustained, specialised technical bandwidth required to develop architecturally coherent specifications, evaluate technical feasibility, and ensure that programme outputs are consistent, well-structured, and ready for execution.

3. Objective of the Expert Committee

The Expert Committee is constituted to fulfil the following primary objectives:

To function as the core technical and strategic body supporting the Task Force Secretariat during the Pre-Investment and Planning phases — providing expert inputs that ensure architectural coherence across OS variants, long-term sustainability, and high-quality, execution-ready documentation.

- Identify common foundational capabilities applicable across all five OS variant categories
- Guide lifecycle management strategies for the Indigenous OS programme
- Ensure programme outputs are well-structured, consistent, technically defensible, and execution-ready
- Provide expert review and validation inputs to the Task Force and its Secretariat

4. Proposed Membership Composition

The Expert Committee shall be constituted with representation from premier academic institutions, national research organisations, public sector undertakings, and the technology industry. The composition is designed to ensure breadth across OS architecture, security, hardware integration, and deployment domains.

4.1 Chairperson

Position	Chairperson
Profile	Senior Academician with distinguished standing in Computer Science, Systems Software, or Operating Systems Engineering from a premier institution of national repute
Role	Chairs Expert Committee meetings; provides overarching technical direction; ensures architectural coherence and quality of technical outputs; interfaces with the Task Force Secretariat

4.2 Domain Experts from Industry, Academia, and R&D

Experts from Indian Industry, Academia, Startups and Research & Development organisations shall be nominated based on demonstrated expertise in one or more of the following technical domains:

- OS Kernel Architecture and Systems Programming
- Toolchain Development (Compilers, Debuggers, Build Systems)
- Middleware Stacks and Platform Abstraction Layers
- OS Security Architecture, Trusted Execution Environments, and Cryptographic Frameworks
- Performance Engineering and Benchmarking
- Interoperability and Standards Compliance
- Embedded and Real-Time Operating Systems
- Mobile Platform Development and Application Ecosystems
- High Performance Computing Environment and Scheduler Design
- Certification and Compliance Frameworks for Software Products

Nominees from Industry may include technologists from Indian technology companies, system integrators, or OS-focused startups with demonstrated product or research credentials. Nominees from Academia and R&D institutions shall include faculty, scientists, or senior researchers from institutions such as the IITs, IIITs, IISc, NIT system, DRDO laboratories, and other recognised national research bodies.

5. Terms, Tenure, and Meetings

Tenure	Co-terminus with the Pre-Investment and Planning phases of the C-DAC's OS Initiative, subject to review by the Task Force Secretariat
Meeting Frequency	At least fortnightly, or more frequently as required by the volume and urgency of technical workstreams
Mode	In-person, hybrid, or virtual, as determined by the Chairperson and TFS

6. Mandate and Responsibilities

The Expert Committee shall discharge the following responsibilities across its operational tenure:

6.1 OS Reference Architecture

- Define a reference architecture for the Indigenous Operating System covering all five OS variant categories: General Purpose, Server, Embedded, Mobile, and HPC
- Identify and document common foundational capabilities and shared software components that can be leveraged across OS variants
- Ensure the reference architecture supports modular development, future extensibility, and alignment with internationally accepted architectural patterns
- Provide architectural guidance on hardware abstraction, driver frameworks, and BSP (Board Support Package) design

6.2 Security, Performance, and Interoperability Standards

- Define security standards for the OS covering access control, privilege separation, secure boot, cryptographic module integration, and supply chain integrity
- Specify performance benchmarking criteria and minimum performance baselines for each OS variant and target device category
- Define interoperability standards to ensure cross-platform compatibility, POSIX conformance, and integration with Government IT infrastructure
- Identify applicable national and international standards and assess their relevance and adoption feasibility for each OS variant

6.3 Technical Review — Kernel, Toolchains, and Middleware

The Expert Committee shall conduct structured technical reviews of the following components and submit recommendations to the Task Force Secretariat:

- **Kernel Choices:** Evaluation of kernel options (monolithic, microkernel, hybrid), licensing implications, community support, and fitness for each OS variant
- **Toolchains:** Assessment of compiler toolchains, build systems, cross-compilation environments, and debugging infrastructure
- **Middleware Stacks:** Review of middleware frameworks, runtime environments, system libraries, and platform abstraction layers relevant to each OS variant

Review findings shall be documented as structured technical position papers and submitted to the TFS for consideration by the Task Force.

6.4 Certification and Compliance Framework

- Define a certification and compliance framework for Indigenous OS products, aligned with the national certification ecosystem (STQC, SAG) and international standards
- Specify evaluation criteria, test harness requirements, and conformance benchmarks for each OS variant
- Recommend a staged compliance pathway from pre-certification through to full certification for Government and Defence deployments
- Identify gaps in existing national certification infrastructure and recommend measures to address them

6.5 Feasibility Validation

- Review and validate technical feasibility assumptions submitted by Technical Groups, Working Groups, or sub-committees operating under the Task Force
- Identify technical risks, dependencies, and constraints in programme proposals and recommend mitigations
- Provide expert opinion on make-vs-adapt-vs-adopt decisions for specific OS components
- Assess readiness of the domestic talent pool and recommend capability-building measures where gaps are identified

6.6 Documentation Quality and Consistency

- Ensure all technical outputs of the programme are well-structured, internally consistent, and of publication quality
- Review and approve technical specifications, standards documents, and feasibility reports before submission to the Task Force
- Maintain a consolidated technical knowledge repository for the OS initiative in coordination with the TFS

7. Key Outputs and Deliverables

The Expert Committee shall produce or contribute to the following outputs:

N o.	Deliverable / Output	Nature
1	Feasibility Validation Reports on Technical Group proposals	Primary Deliverable
2	OS Standards and Specifications. (all five OS variants)	Primary Deliverable
3	Detailed Project Report	Primary Deliverable

8. Nomination Process

Competent authorities from the institutions listed in Section 4 are requested to nominate suitable representatives. Nominations shall include the following information:

- Full name and designation of the nominee
- Organization, institution, and department/division
- Brief technical profile (not exceeding 300 words), highlighting domain expertise relevant to the Expert Committee mandate
- List of up to five relevant publications, projects, or technical contributions
- Contact details (official email and telephone)

- Declaration of absence of conflict of interest in respect of commercial OS products

Nominations shall be submitted to the designated C-DAC's nodal officer (prabhav@cdac.in) before 6-August-2026.

The C-DAC Competent Authority related to the subject matter will finalize the committee members of the nomination received after evaluation of their credentials and expertise. C-DAC's decision will be final in this regard.

9. Honorarium, Travel and Accommodation

The technical experts of the Expert Committee shall be paid honorarium as per the prevailing Government of India norms. Travel and accommodation shall be booked by C-DAC based on the requirements.

10. Confidentiality and Conflict of Interest

- a. The selected Experts shall maintain strict confidentiality of all information, documents, technical specifications, reports, deliberations, data, software, source code, intellectual property, and any other material accessed or generated during the course of their engagement with C-DAC. Such information shall not be disclosed, published, reproduced, or used for any purpose other than the assignment entrusted by C-DAC, without its prior written approval.
- b. The selected Experts may be required to execute a Non-Disclosure Agreement (NDA) and such other declarations as may be prescribed by C-DAC before commencement of the engagement.
- c. Applicants shall disclose any actual, potential, or perceived conflict of interest that may affect their independence or impartiality in discharging the responsibilities under the programme. In the event of any conflict arising during the period of engagement, the Expert shall immediately inform C-DAC in writing.
- d. C-DAC reserves the right to determine the existence of a conflict of interest and to require the Expert to recuse from specific assignments or terminate the engagement, if considered necessary in the interest of the programme.
- e. Any breach of confidentiality or failure to disclose a conflict of interest may result in cancellation or termination of the engagement.
- f. Individuals or companies participating pursuant to this notice shall be Indian citizens or Indian-registered entities only. They shall not, during the tenure of the engagement, provide similar services or undertake assignments for any foreign government, foreign entity, or foreign organization that may give rise to a conflict of interest.
- g. Further, such individuals or companies shall not be eligible to participate, either directly or indirectly, in any subsequent Request for Proposal (RFP), tender, or procurement process arising out of or related to this engagement.

Nomination Form — Expert Committee

Kindly complete this form and return it to the C-DAC nodal officer (prabhav@cdac.in) on or before the nomination 3-August-2026.

Full Name of Nominee	
Current Designation	
Organisation / Institution	
Division / Department	
Category of Representation	<i>(e.g., C-DAC / PSU / Academia / Industry / R&D)</i>
Primary Domain of Expertise	<i>(e.g., Kernel Architecture / OS Security / Toolchains / Embedded OS) Refer Sec 4.2</i>
Brief Technical Profile (max 300 words)	
Relevant Contributions (up to 5)	<i>(Publications, projects, or technical contributions)</i>
Official Email Address	
Official Telephone / Mobile	
Conflict of Interest Declaration	I confirm that I have no direct or indirect conflict of interest. (Signature: _____)
Authorised by (Nominating Authority)	Name, Designation, and Seal
Date	

NON-DISCLOSURE AGREEMENT (NDA)

This Non-Disclosure Agreement ("Agreement") is executed on this ____ day of _____, 20.

BETWEEN

The Centre for Development of Advanced Computing (C-DAC), an Autonomous Scientific Society of the Ministry of Electronics and Information Technology (MeitY), Government of India, having its registered office at Pune and represented by its authorized signatory (hereinafter referred to as "**C-DAC**", which expression shall, unless repugnant to the context, include its successors and permitted assigns);

AND

Dr./Mr./Ms. _____, residing at _____ (hereinafter referred to as the

"Expert", which expression shall include his/her legal heirs, executors, administrators, and permitted assigns).

C-DAC and the Expert are hereinafter individually referred to as a **"Party"** and collectively as the **"Parties."**

1. Purpose

The Expert has been engaged by C-DAC on an honorarium basis to provide technical and strategic inputs for the **Indigenous Sovereign Operating System (OS) Initiative**. During the course of such engagement, the Expert may receive access to confidential and proprietary information belonging to C-DAC.

2. Confidential Information

"Confidential Information" includes all information disclosed by C-DAC in any form, including but not limited to technical documents, software, source code, architectures, specifications, reports, designs, presentations, meeting proceedings, research material, project plans, security-related information, intellectual property, business information, and any other information designated as confidential or which by its nature ought reasonably to be treated as confidential.

3. Obligations of the Expert

The Expert agrees to:

- a. use the Confidential Information solely for the purpose of performing the assigned responsibilities under the engagement;
- b. keep all Confidential Information strictly confidential;
- c. not disclose, copy, reproduce, publish, distribute, or communicate any Confidential Information to any person or organization without the prior written approval of C-DAC;
- d. exercise reasonable care to protect the Confidential Information from unauthorized access, disclosure, or misuse; and
- e. immediately notify C-DAC upon becoming aware of any unauthorized disclosure or breach of confidentiality.

4. Exclusions

The obligations under this Agreement shall not apply to information which:

- a. is or becomes publicly available without breach of this Agreement;
- b. was lawfully known to the Expert before disclosure by C-DAC;
- c. is received from a third party without any confidentiality obligation; or
- d. is required to be disclosed under any law or court order, provided that the Expert promptly informs C-DAC, to the extent legally permissible.

5. Intellectual Property

All reports, recommendations, notes, analyses, technical documents, and other work products prepared by the Expert as part of the engagement shall become the property of C-DAC. Nothing contained in this Agreement shall be construed as granting any ownership or licence in respect of C-DAC's intellectual property.

6. Return of Information

Upon completion or termination of the engagement, or upon request by C-DAC, the Expert shall promptly return or permanently delete all Confidential Information in his/her possession and shall not retain any copies, except where required by law.

7. Term

This Agreement shall remain in force during the period of engagement and the obligations relating to confidentiality shall continue for a period of **five (5) years** after the expiry or termination of the engagement.

8. Breach

Any breach of this Agreement may result in immediate termination of the engagement and C-DAC shall be entitled to seek appropriate legal remedies available under applicable law.

9. Governing Law and Jurisdiction

This Agreement shall be governed by the laws of India. Any dispute arising out of or in connection with this Agreement shall be subject to the exclusive jurisdiction of the competent courts at **Chennai, Tamil Nadu**.

10. Entire Agreement

This Agreement constitutes the entire understanding between the Parties with respect to confidentiality relating to the engagement and supersedes any prior oral or written understanding on the subject.

IN WITNESS WHEREOF

The Parties have executed this Agreement on the date first mentioned above.

For C-DAC

Name: _____

Designation: _____

Signature: _____

Date: _____

Expert

Name: _____

Signature: _____

Date: _____