

# seL4 Center of Excellence (CoE) Initial requirements Review

March 16 2018

Intelligent Automation, Inc.

Jason Li (jli@i-a-i.com)

Nick Evancich (nevancich@i-a-i.com)

**DISTRIBUTION STATEMENT A:** Public release directed by: DARPA 675 N Randolph Rd, Arlington, VA 22203.



Intelligent Automation, Inc.  
15400 Calhoun Drive, Suite 190  
Rockville, MD 20855

# Goals of the seL4 CoE

1. **Increase Collaboration** between seL4 contributors
2. **Increase Industry Adoption** of seL4
3. **Increase the Maturity** of seL4 by:
  1. Adding formally verifiable features and libraries
  2. Increasing stability
  3. Adopting modern SW engineering practices



# Role of the USA seL4 CoE

1. Coordinates between US and non-US organizations
  - Decrease repeated development efforts in order to streamline seL4 development for industry adoption
2. Maintains the USA public and private repositories
  - Performs the role of the facilitator
    - CoE Governing Body is not taking ownership for content submitted by contributors
    - CoE Governing Body and DoD stakeholders define the rules by which others use these repositories
  - Advocates for other USA contractors to use these repositories
    - Encourages use of the US-based repositories by adding new seL4 features
3. Provides training and support
  - Create and distribute a common set of training and documentation for users interested in seL4

# CoE Teaming Agreement

1. CoE members **agree to work towards achieving the overall CoE goals** stated earlier.
2. CoE members **agree to share their intermediate progress and source code** of CORE seL4 components (i.e., no application-specific code needs to be shared) with other CoE members to the extent that their contracts allow.
3. CoE members **agree to open-source** their additions to seL4 to the extent that their contracts allow.
4. CoE members **agree to put all of their additions to seL4 in the CoE Repositories.**
5. CoE members **agree to follow the CoE's bylaws** when using USA Public or Private Repositories

# Public and Private Repositories & Distribution

1. Public distribution of seL4 components will be performed via the public [www.github.com](http://www.github.com) organization account at <https://github.com/seL4-US>
2. Private distribution of seL4 components that have been developed by US-based contributors with proper distribution statement or government approval will be uploaded to a secure and access controlled CoE private server
  - ITAR controlled
  - Distribution will be performed either according to Government Distribution Statements B, C, or D, or according to special requirements defined by the Government.
3. Public and Private Repositories differ in terms of A) content, B) access control, C) level of access granted, and D) requirements for submitting new content



# Requirements for Public Repositories

1. Public Repositories are on **www.github.com**
2. IAI currently holds the **USA seL4 www.github.com account**. Others submit their code changes to the CoE Governing Body for review before it is incorporated into the greater codebase.
3. Regarding **repository content**, CoE members agree to:
  1. Only submit code for incorporation that has been approved for open-source
  2. Follow the CoE Test Procedure before submitting their code for incorporation
  3. Use [www.github.com](http://www.github.com) Pull-Requests to submit their finalized code changes for approval before those changes are incorporated into the repositories
  4. Include release notes explaining their changes
  5. Perform code reviews
  6. Get permission from the CoE Governing Body before making major architecture changes
  7. Allow the CoE to remove their content if it introduces errors

# Requirements for Initial Private Repositories

1. Private Repositories are on a **secure and managed server controlled by the CoE**
2. The CoE Controls Access to Private Repositories. **Access list is defined by CoE in coordination with the USG**
3. Private repositories are used **for firewalled development of seL4 by individual members of the CoE**
4. Regarding **repository content**, CoE members agree to:
  1. Provide Citizenship and government sponsor information
  2. Let the CoE know when members use the repositories for a new project
  3. Get permission from the CoE Governing Body before making changes to mainline (i.e., master) branches
  4. Understand that there is no review procedure and no code in these repositories is provided with a guarantee that it will work. Individual members / organization are responsible for their own code / capability
  5. Inform the CoE Governing Body before open-sourcing any content
  6. Understand that the CoE may remove content if it is causing problems for others