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CCC TAC Submission Open Enclave SDK

ABSTRACT

The purpose of this document is to provide the relevant details for official proposal submission of the Open Enclave SDK to the Confidential Computing Consortium.

REVISIONS

| DATE | SUMMARY |
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| 2019/10/24 | Created |
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| NAME OF PROJECT | Open Enclave SDK |
| PROJECT DESCRIPTION <ul style="list-style-type: none"> • WHAT IT DOES? • WHY IS IT VALUABLE? • ORIGIN AND HISTORY | <p>The Open Enclave SDK is targeted at creating a single unified enclave abstraction for developers to build TEE-based applications.</p> <p>It creates a pluggable, common way to create redistributable "confidential applications" securing data in use. Open Enclave SDK offers fully open sourced TEE development and deployment models for multiple operating systems and multiple TEE platforms.</p> <p>The project was initiated by Microsoft in close collaboration with Intel to abstract away low- level TEE concepts and TEE technology specific tooling to support higher level TEE agnostic primitives. The project was made public with full commit history on October 2018. Since then it has had over 50 contributors with 5000 commits, 8 releases with 1350 PRs (roughly 25-100 commits per week)</p> |
| STATEMENT ON ALIGNMENT (WITH CONSORTIUM CHARTER'S MISSION) | The Open Enclave SDK is contributed to the Confidential Computing Consortium to develop a broader industry collaboration and ensure a truly open development approach. The Open Enclave SDK is targeted at creating a single unified enclave abstraction for developers to build TEE-based applications. It creates a pluggable, common way to create redistributable trusted applications securing data in use. This is aligned with the CCC mission. |
| LINK TO CURRENT CODE OF CONDUCT (IF ONE IS ADOPTED ALREADY) | https://opensource.microsoft.com/codeofconduct/ |
| SPONSOR FROM TAC, IF IDENTIFIED (A SPONSOR HELPS MENTOR PROJECTS) | Dave Thaler is Microsoft's TAC member. |
| PROJECT LICENSE | MIT License |
| SOURCE CONTROL (DEFAULT: GITHUB) | GitHub |
| ISSUE TRACKER (DEFAULT: GITHUB) | GitHub |

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| <p>EXTERNAL DEPENDENCIES (INCLUDING LICENSES)</p> | <p>All 3rd party dependencies including license information is available here: https://github.com/openenclave/openenclave/tree/master/3rdparty</p> <p>Details include:</p> <p>dlmalloc - Dynamic memory allocator (used in oellibc) License: Public domain</p> <p>musl - Standard C library implementation (used in oellibc) Copyright: MIT</p> <p>libcxx - Standard C++ library (used in oellibcxx) License: "BSD Like" or MIT</p> <p>libcxxrt - C++ runtime support library (used in oellibcxx) License: BSD</p> <p>libunwind - C++ exception unwinding library (used in oellibcxx) License: Link</p> <p>mbedtls - Crypto library License: Apache 2.0</p> <p>Optee – Support for Optee over ARM License: Optee client link, Optee OS link</p> |
| <p>RELEASE METHODOLOGY AND MECHANICS</p> | <p>Linux: Debian packages (Github repo and APT repo), Windows: NUGET Packages on GitHub (as of now)</p> |
| <p>NAMES OF INITIAL COMMITTEES, (IF DIFFERENT FROM THOSE SUBMITTING PROPOSAL)</p> | <p>https://github.com/openenclave/openenclave/blob/master/docs/Committers.md</p> |
| <p>DESCRIBE THE PROJECT'S LEADERSHIP TEAM AND DECISION-MAKING PROCESS</p> | <p>https://github.com/openenclave/openenclave/blob/master/docs/Committers.md</p> |

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| LINK TO ANY DOCUMENTED GOVERNANCE PRACTICES | https://github.com/openenclave/openenclave/blob/master/docs/Governance.md |
| PREFERRED MATURITY LEVEL | Growth For details, refer to Maturity Level: Growth below. |
| LIST OF PROJECT'S OFFICIAL COMMUNICATION CHANNELS (SLACK, IRC, MAILING LISTS) | https://gitter.im/openenclave/community |
| LINK TO PROJECT'S WEBSITE | https://github.com/openenclave/openenclave/ https://openenclave.io/sdk/ |
| LINKS TO SOCIAL MEDIA ACCOUNTS | https://gitter.im/openenclave/community |
| EXISTING FINANCIAL SPONSORSHIP | To date, the Open Enclave SDK has been sponsored by Microsoft. |
| INFRASTRUCTURE NEEDS OR REQUESTS | Fund for h/w resource running for CI/CD pipelines Provide resource to co-maintain CI/CD pipelines, including maintaining 3 rd party libraries/repos that OE SDKs are built upon. These 3 rd party repos/libraries could be used as common libraries used by other CCC projects. |

MATURITY LEVEL: GROWTH

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| <p>Includes "At Large" Stage Criteria:</p> <ol style="list-style-type: none">1. 2 TAC sponsors to champion the project & provide mentorship as needed2. A presentation to at the meeting of the TAC3. Adherence to the Consortium's IP Policy | <ol style="list-style-type: none">1. Dave Thaler,2. TAC meeting – OSS Summit, Lyon3. Yes |
| <p>Development of a growth plan, to be done in conjunction with their project mentor(s) at the TAC.</p> | <ol style="list-style-type: none">1) Invite contributors from other organizations to become maintainers as they demonstrate good contributions via PRs and/or Issues filed and/or code/design review feedback2) Expand to other TEEs and other OS's by inviting contributions |
| <p>Document that it is being used successfully in production by at least two independent end users which, in the TAC's judgement, are of adequate quality and scope.</p> | <p>The Open Enclave SDK is being used for at least 2 or more production services. Details for these cannot yet be disclosed due to confidentiality clauses and NDAs.</p> |
| <p>Demonstrate a substantial ongoing flow of commits and merged contributions.</p> | <p>Close to 5200 commits, Over 1350 PRs Over 50 contributors, 100 forks, 280 stars. Active project with 10 releases and 25-100 commits per week.</p> |
| <p>Demonstrate that the current level of community participation is sufficient to meet the goals outlined in the growth plan.</p> | <p>Starting to see some contributions from non-Microsoft parties already</p> |
| <p>Receive a two-thirds supermajority vote of the TAC to move to Growth Stage.</p> | |

