CSfC Selections for Certificate Authorities

Certificate Authorities used in CSfC solutions shall be validated by NIAP/CCEVS or CCRA partnering schemes as complying with the current requirements of NIAP's Protection Profile for Certification Authorities. This validated compliance shall include the selectable requirements contained in this document.

CSfC selections for Certificate Authority evaluations:

FCS_CKM.1.1(1): The TSF shall generate asymmetric cryptographic keys used for key establishment in accordance with:

- *NIST Special Publication 800-56A, "Recommendation for Pair-Wise Key Establishment Schemes Using Discrete Logarithm Cryptography" for elliptic curve-based key establishment schemes and implementing "NIST curves" P-256, P-384 and[selection: P-521, no other curves] (as defined in FIPS PUB 186-4, "Digital Signature Standard")*

FCS_CKM.1.1(2) The TSF shall generate asymmetric cryptographic keys used for authentication in accordance with a specified cryptographic key generation algorithm

- *FIPS PUB 186-4, "Digital Signature Standard (DSS)", Appendix B.4 for ECDSA schemes and implementing "NIST curves" P-256, P-384 and [selection: P-521, no other curves]*

FCS_COP.1.1(1) **Refinement:** The TSF and [selection: TOE environment, no other component] shall perform [*encryption and decryption*] in accordance with a specified cryptographic algorithm:

- AES-CBC (as defined in NIST SP 800-38A) mode
- AES-GCM (as defined in NIST SP 800-38D) mode,

and cryptographic key size 128-bit key size and [256-bit key size].

FCS_COP.1.1(2) **Refinement:** The TSF and [selection: TOE environment no other component] shall perform **cryptographic signature services** in accordance with the following specified cryptographic algorithms

- Elliptic Curve Digital Signature Algorithm (ECDSA) with a key size of 256 bits or greater that meets FIPS PUB 186-4, "Digital Signature Standard" with "NIST curves" P-256, P-384 and [selection: P-521, no other curves] (as defined in FIPS PUB 186-4, "Digital Signature Standard")

FCS_COP.1.1(3) **Refinement:** The TSF and [selection: TOE environment, no other component] shall perform [*cryptographic hashing services*] in accordance with a specified cryptographic algorithm **[SHA-256, SHA-384] and message digest sizes [256, 384] bits** that meet the following: *FIPS Pub 180-4, "Secure Hash Standard."*

FCS_RBG_EXT.1.2 The deterministic RBG shall be seeded by an entropy source that accumulates entropy from [selection: a software-based noise source, TSF hardware-based noise source] with a minimum of [256 bits] of entropy at least equal to the greatest security strength (according to NIST SP 800-57) of the keys and authorization factors that it will generate.