



INDEPENDENT ASSURANCE REPORT

To the management of the TAIWAN-CA INC. :

Scope

We have been engaged, in a reasonable assurance engagement, to report on TWCA management's assertion that for its Certification Authority (CA) operations at Taipei City, New Taipei City and Taichung City, Taiwan, throughout the period January 1, 2023 to December 31, 2023 for its CAs as enumerated in [Appendix](#), TWCA has:

- disclosed its extended validation SSL ("EV SSL") certificate lifecycle management business practices in its:
 - TWCA Cyber Certification Authority Certification Practice Statement [V1.0](#), effective from 30 June 2023; and
 - TWCA Public Key Infrastructure Certificate Policy [V2.6](#) , effective from 20 July 2023;

including its commitment to provide EV SSL certificates in conformity with the CA/Browser Forum Guidelines on the TWCA website, and provided such services in accordance with its disclosed practices

- maintained effective controls to provide reasonable assurance that:
 - the integrity of keys and EV SSL certificates it



manages is established and protected throughout their lifecycles; and

- EV SSL subscriber information is properly authenticated (for the registration activities performed by TWCA)

in accordance with the WebTrust Principles and Criteria for Certification Authorities – Extended Validation SSL [v1.7.8](#).

Certification authority's responsibilities

TWCA's management is responsible for its assertion, including the fairness of its presentation, and the provision of its described services in accordance with the WebTrust Principles and Criteria for Certification Authorities - Extended Validation SSL v1.7.8.

Our independence and quality control

We have complied with the independence and other ethical requirements of the *Code of Ethics for Professional Accountants* issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

The firm applies International Standard on Quality Control 1, *Quality Control for Firms that Perform Audits and Reviews of Historical Financial Information, and Other Assurance and Related Services*, and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.



Practitioner's responsibilities

Our responsibility is to express an opinion on management's assertion based on our procedures. We conducted our procedures in accordance with International Standard on Assurance Engagements 3000, *Assurance Engagements Other than Audits or Reviews of Historical Financial Information*, issued by the International Auditing and Assurance Standards Board. This standard requires that we plan and perform our procedures to obtain reasonable assurance about whether, in all material respects, management's assertion is fairly stated, and, accordingly, included:

1. obtaining an understanding of TWCA's EV SSL certificate lifecycle management business practices, including its relevant controls over the issuance, renewal, and revocation of EV SSL certificates;
2. selectively testing transactions executed in accordance with disclosed EV SSL certificate lifecycle management practices;
3. testing and evaluating the operating effectiveness of the controls; and
4. performing such other procedures as we considered necessary in the circumstances.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our opinion.

The relative effectiveness and significance of specific controls at TWCA and their effect on assessments of control risk for subscribers and relying parties are dependent on their interaction with the controls, and other factors present at individual subscriber and relying party locations. We



have performed no procedures to evaluate the effectiveness of controls at individual subscriber and relying party locations.

Inherent limitations

There are inherent limitations in the effectiveness of any system of internal control, including the possibility of human error and the circumvention of controls. For example, because of their nature, controls may not prevent, or detect unauthorised access to systems and information, or failure to comply with internal and external policies or requirements. Also, the projection to the future of any conclusions based on our findings is subject to the risk that controls may become ineffective.

Opinion

In our opinion, throughout the period January 1, 2023 to December 31, 2023, TWCA management's assertion, as referred to above, is fairly stated, in all material respects, in accordance with the WebTrust Principles and Criteria for Certification Authorities - Extended Validation SSL Version 1.7.8.

This report does not include any representation as to the quality of TWCA's services beyond those covered by the WebTrust Principles and Criteria for Certification Authorities - Extended Validation SSL v1.7.8, nor the suitability of any of TWCA's services for any customer's intended purpose.



Use of the WebTrust seal

TWCA's use of the WebTrust for Certification Authorities – Extended Validation SSL Seal constitutes a symbolic representation of the contents of this report and it is not intended, nor should it be construed, to update this report or provide any additional assurance.

KPMG Chen, Pin Chi

KPMG

Certified Public Accountants

Taipei, Taiwan, ROC

March 11, 2024



Appendix – List of Root and Subordinate CAs in Scope

1

TWCA CYBER Root CA	TWCA CYBER Root CA
	Subject
	CN = TWCA CYBER Root CA OU = Root CA O =TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 4001348cc200000000000000013cf2c6 Signature Algorithm: sha384RSA Not Before: 2022-Nov-22 14:54:29 Not After: 2047- Nov-22 23:59:59 Thumbprint Algorithm: sha1 Thumbprint f6b11c1a8338e97bdbb3a8c83324e02d9c7f2666 Thumbprint Algorithm: sha2 Thumbprint 3F63BB2814BE174EC8B6439CF08D6D56F0B7C405883A5648A334424D6B3EC558
	Issuer
	CN = TWCA CYBER Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 9d 85 61 14 7c c1 62 6f 97 68 e4 4f 37 40 e1 ad e0 0d 56 37 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA EVSSL Certification Authority	TWCA EVSSL Certification Authority	
	Subject	
	CN = TWCA EVSSL Certification Authority OU = EVSSL Sub-CA O =TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 400134B04F0000000000000004AA7B0A Signature Algorithm: sha384RSA Not Before: 2023-Feb-23 15:27:25 Not After: 2033-Feb-23 23:59:59 Thumbprint Algorithm: sha1 Thumbprint C9D8637AF4E4AC31E15AC44781CEE2E3E4D969AC Thumbprint Algorithm: sha2 Thumbprint F76E3339A6773DC5922DA154628C8D22B5C915EDCB15270DB8FB3D8D24959E98	
	Issuer	
	CN = TWCA CYBER Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: eb 82 76 72 51 b9 95 50 83 85 76 12 7f 83 18 f5 10 ec 10 53 Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global Root CA	TWCA Global Root CA
	Subject
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 0cbe Signature Algorithm: sha256RSA Not Before: 2012-Jun-27 14:28:33 Not After: 2030-Dec-31 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 9cbb4853f6a4f6d352a4e83252556013f5adaf65 Thumbprint Algorithm: sha2 Thumbprint 59769007F7685D0FCD50872F9F95D5755A5B2B457D81F3692B610A98672F0E1B
	Issuer
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Basic Constraint: Subject Type=CA Path Length Constraint=None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Secure SSL Certification Authority	TWCA Secure SSL Certification Authority
	Subject
	CN = TWCA Secure SSL Certification Authority OU = Secure SSL Sub-CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 40013353e400000000000000cc36e888d Signature Algorithm: sha256RSA Not Before: 2014-Oct-28 15:27:56 Not After: 2024-Oct-28 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 0a72efd660fd34f254e66a8595ba81e60a754e68 Thumbprint Algorithm: sha2 Thumbprint 9B16F2F680D7C4BD6A67F609340DA6416ABF9E43F1326B01B988192271D0B5F2
	Issuer
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(2048 bits) Authority Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Subject Key Identifiers: f8 07 c2 68 24 ff 85 95 cb db 1e e3 33 9c 2a 4f 97 20 56 7b Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Secure SSL Certification Authority	TWCA Secure SSL Certification Authority
	Subject
	CN = TWCA Secure SSL Certification Authority O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 400134b36800000000000000cd0aa08ec Signature Algorithm: sha256RSA Not Before: 2023-Oct-16 17:01:04 Not After: 2030-Oct-16 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 7723f095467ebbe467cbe4a7db213975cf93c8b7 Thumbprint Algorithm: sha2 Thumbprint 1A2C75FD096E0499E9FF6AC74E526F61EAAE3EDFC8C2EA4436FEE0C24D8B7D0E
	Issuer
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(2048 bits) Authority Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Subject Key Identifiers: 92 e7 fa 62 16 71 8c f3 97 71 42 c6 06 a7 e0 46 61 4b 5c b6 Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Digital Signature, Certificate Signing, Off-line CRL Signing, CRL Signing (86)

TWCA CYBER Root CA	TWCA CYBER Root CA(Cross)	
	Subject	
	CN = TWCA CYBER Root CA OU = Root CA O =TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 4001348d1900000000000000ccdf9937a Signature Algorithm: sha384RSA Not Before: 2022-Dec-9 12:00:27 Not After: 2030- Dec-9 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 0f49cce5f4afb4701468954fdb4357a4b6929fb Thumbprint Algorithm: sha2 Thumbprint C619F4E6F7B1BAA7A6C6F244092A3F82E46A6D67BEE26337FBAF02546F33133F	
	Issuer	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 9d 85 61 14 7c c1 62 6f 97 68 e4 4f 37 40 e1 ad e0 0d 56 37 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global EVSSL Certification Authority	TWCA Global EVSSL Certification Authority
	Subject
	CN = TWCA Global EVSSL Certification Authority OU = Global EVSSL Sub-CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 40013304f700000000000000cc042cd6d Signature Algorithm: sha256RSA Not Before: 2012-Aug-23 17:53:30 Not After: 2030-Aug-23 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 071a25fa76a200da3c53f1ee791e7b627d32c349 Thumbprint Algorithm: sha2 Thumbprint 49695A5F0F7EF6EDF698193D99ED48BAADE20EA457403C11CEAD492C458665DA
	Issuer
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key:RSA(2048 bits) Authority Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Subject Key Identifiers: 6e bd a1 2b ce e4 c2 d5 28 74 5c bd d9 8c 6f 04 72 2a 06 de Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Global Root CA G2	TWCA Global Root CA G2(Cross)
	Subject
	CN = TWCA Global Root CA G2 OU = Root CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 4001348d1900000000000000ccce78f26 Signature Algorithm: sha384RSA Not Before: 2022-Dec-9 11:44:17 Not After: 2030- Dec-9 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 27ce93669629b5e45a61122addcf7a9cae2936a9 Thumbprint Algorithm: sha2 Thumbprint D53BF4968A7DB3C8C4E3366F2C7F76AD61B7041DFEFC64C1902C499A6FFFF241
	Issuer
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 92 8c d4 36 d1 5b 47 53 c4 71 0d 84 dd 64 2a f5 36 64 40 e7 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Global Root CA G2	TWCA Global Root CA G2
	Subject
	CN = TWCA Global Root CA G2 OU = Root CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 4001348cc2000000000000000019758f4 Signature Algorithm: sha384RSA Not Before: 2022-Nov-22 14:42:21 Not After: 2047- Nov-22 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 73fe922f836391ffc8c6c4dad6202f6b072e7f1b Thumbprint Algorithm: sha2 Thumbprint 3A0072D49FFC04E996C59AEB75991D3C340F3615D6FD4DCE90AC0B3D88EAD4F4
	Issuer
	CN = TWCA Global Root CA G2 OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 92 8c d4 36 d1 5b 47 53 c4 71 0d 84 dd 64 2a f5 36 64 40 e7 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Root Certification Authority	TWCA Root Certification Authority(2048)	
	Subject	
	CN = TWCA Root Certification Authority OU = Root CA O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 01 Signature Algorithm: sha1RSA Not Before: 2008-Aug-28 15:24:33 Not After: 2030-Dec-31 23:59:59 Thumbprint Algorithm: sha1 Thumbprint cf9e876dd3ebfc422697a3b5a37aa076a9062348 Thumb print Algorithm: sha2 Thumbprint BFD88FE1101C41AE3E801BF8BE56350EE9BAD1A6B9BD515EDC5C6D5B8711AC44	
	Issuer	
	CN = TWCA Root Certification Authority OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(2048 bits) Subject Key Identifiers: 6a 38 5b 26 8d de 8b 5a f2 4f 7a 54 83 19 18 e3 08 35 a6 ba Basic Constraint: Subject Type=CA Path Length Constraint=None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global Root CA	TWCA Global Root CA(Cross)
	Subject
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number: 40013353e4000000000000cca5d1b69 Signature Algorithm: sha256RSA Not Before: 2014-Oct-28 15:38:31 Not After: 2030-Oct-28 23:59:59 Thumbprint Algorithm: sha1 Thumbprint fd54e4643b49705a2aae50653c4f56c2df8083d Thumbprint Algorithm: sha2 Thumbprint 8AD47F6D70A44FA80AF0F931125FFE3A76876FFAD219A4D40A13C038DC85E69E
	Issuer
	CN = TWCA Root Certification Authority OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Basic Constraint: Subject Type=CA Path Length Constraint=None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)



**Assertion of Management as to
its Design of its Business Practices and its Controls Over
its Certification Authority Operations during the period
from January 1, 2023 through December 31, 2023**

March 11, 2024

The TAIWAN-CA INC. (TWCA) operates the Certification Authority (CA) services known as TWCA Root Certification Authority and TWCA Global Root Certification Authority, TWCA CYBER Root Certification Authority and TWCA EVSSL Certification Authority, and provides Extended Validation SSL (“EV SSL”) CA services. A full listing of the Root CAs and Subordinate CAs and their respective functions is in [Appendix](#) to this assertion letter.

The management of TWCA is responsible for establishing and maintaining effective controls over its EV SSL CA operations, including its EV SSL CA business practices disclosure on its [website](#), EV SSL key lifecycle management controls, and EV SSL certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

There are inherent limitations in any controls, including the possibility of human error, and the circumvention or overriding of controls. Accordingly, even effective controls can only provide reasonable

assurance with respect to TWCA's Certification Authority operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

The management of TAIWAN-CA INC. (TWCA) has assessed the disclosure of its certificate practice and its controls over its EVSSL CA services. Based on that assessment, in TWCA Management's opinion, in providing its EV SSL CA services located at Taipei city , New Taipei city and Taichung city, Taiwan , throughout the period January 1, 2023 to December 31, 2023. TWCA EVSSL Certification Authority CA has:

- Disclosed its extended validation SSL ("EV SSL") certificate lifecycle business practices in its:
 - TWCA Cyber Certification Authority Certification Practice Statement [V1.0](#), effective from 30 June 2023; and
 - TWCA Public Key Infrastructure Certificate Policy [V2.6](#) , effective from 20 July 2023;including its commitment to provide EV SSL certificates in conformity with the CA/Browser Forum Guidelines on the TWCA [website](#), and provided such services in accordance with its disclosed practices.
- Maintained effective controls to provide reasonable assurance that:
 - The integrity of keys and EV certificates it managed is established and protected throughout their life cycles; and
 - EV Subscriber information was properly authenticated (for the registration activities performed by TWCA)

in accordance with the WebTrust Principles and Criteria for Certification
Authorities – Extended Validation SSL v1.7.8.

Title: President

Signature

CHAO-HUAN 

Date March 11, 2024

TAIWAN-CA INC. (TWCA)

10F., No.85, Yanping S. Rd., Zhongzheng Dist., Taipei City 100, Taiwan
(R.O.C.)

Appendix – List of Root and Subordinate CAs in Scope

1

TWCA CYBER Root CA	TWCA CYBER Root CA	
	Subject	
	CN = TWCA CYBER Root CA OU = Root CA O =TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 4001348cc200000000000000013cf2c6 Signature Algorithm: sha384RSA Not Before: 2022-Nov-22 14:54:29 Not After: 2047- Nov-22 23:59:59 Thumbprint Algorithm: sha1 Thumbprint f6b11c1a8338e97bdbb3a8c83324e02d9c7f2666 Thumbprint Algorithm: sha2 Thumbprint 3F63BB2814BE174EC8B6439CF08D6D56F0B7C405883A5648A334424D6B3EC558	
	Issuer	
	CN = TWCA CYBER Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 9d 85 61 14 7c c1 62 6f 97 68 e4 4f 37 40 e1 ad e0 0d 56 37 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA EVSSL Certification Authority	TWCA EVSSL Certification Authority	
	Subject	
	CN = TWCA EVSSL Certification Authority OU = EVSSL Sub-CA O =TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 400134B04F0000000000000004AA7B0A Signature Algorithm: sha384RSA Not Before: 2023-Feb-23 15:27:25 Not After: 2033-Feb-23 23:59:59 Thumbprint Algorithm: sha1 Thumbprint C9D8637AF4E4AC31E15AC44781CEE2E3E4D969AC Thumbprint Algorithm: sha2 Thumbprint F76E3339A6773DC5922DA154628C8D22B5C915EDCB15270DB8FB3D8D24959E98	
	Issuer	
	CN = TWCA CYBER Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: eb 82 76 72 51 b9 95 50 83 85 76 12 7f 83 18 f5 10 ec 10 53 Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global Root CA	TWCA Global Root CA
	Subject
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 0cbe Signature Algorithm: sha256RSA Not Before: 2012-Jun-27 14:28:33 Not After: 2030-Dec-31 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 9cbb4853f6a4f6d352a4e83252556013f5adaf65 Thumbprint Algorithm: sha2 Thumbprint 59769007F7685D0FCD50872F9F95D5755A5B2B457D81F3692B610A98672F0E1B
	Issuer
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Basic Constraint: Subject Type=CA Path Length Constraint=None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Secure SSL Certification Authority	TWCA Secure SSL Certification Authority	
	Subject	
	CN = TWCA Secure SSL Certification Authority OU = Secure SSL Sub-CA O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 40013353e400000000000000cc36e888d Signature Algorithm: sha256RSA Not Before: 2014-Oct-28 15:27:56 Not After: 2024-Oct-28 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 0a72efd660fd34f254e66a8595ba81e60a754e68 Thumbprint Algorithm: sha2 Thumbprint 9B16F2F680D7C4BD6A67F609340DA6416ABF9E43F1326B01B988192271D0B5F2	
	Issuer	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(2048 bits) Authority Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Subject Key Identifiers: f8 07 c2 68 24 ff 85 95 cb db 1e e3 33 9c 2a 4f 97 20 56 7b Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Secure SSL Certification Authority	TWCA Secure SSL Certification Authority	
	Subject	
	CN = TWCA Secure SSL Certification Authority O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 400134b36800000000000000cd0aa08ec Signature Algorithm: sha256RSA Not Before: 2023-Oct-16 17:01:04 Not After: 2030-Oct-16 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 7723f095467ebbe467cbe4a7db213975cf93c8b7 Thumbprint Algorithm: sha2 Thumbprint 1A2C75FD096E0499E9FF6AC74E526F61EAAE3EDFC8C2EA4436FEE0C24D8B7D0E	
	Issuer	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(2048 bits) Authority Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Subject Key Identifiers: 92 e7 fa 62 16 71 8c f3 97 71 42 c6 06 a7 e0 46 61 4b 5c b6 Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Digital Signature, Certificate Signing, Off-line CRL Signing, CRL Signing (86)	

TWCA CYBER Root CA	TWCA CYBER Root CA(Cross)	
	Subject	
	CN = TWCA CYBER Root CA OU = Root CA O =TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 4001348d1900000000000000ccdf9937a Signature Algorithm: sha384RSA Not Before: 2022-Dec-9 12:00:27 Not After: 2030- Dec-9 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 0f49cce5f4afb4701468954fdb4357a4b6929fb Thumbprint Algorithm: sha2 Thumbprint C619F4E6F7B1BAA7A6C6F244092A3F82E46A6D67BEE26337FBAF02546F33133F	
	Issuer	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 9d 85 61 14 7c c1 62 6f 97 68 e4 4f 37 40 e1 ad e0 0d 56 37 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global EVSSL Certification Authority	TWCA Global EVSSL Certification Authority	
	Subject	
	CN = TWCA Global EVSSL Certification Authority OU = Global EVSSL Sub-CA O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 40013304f700000000000000cc042cd6d Signature Algorithm: sha256RSA Not Before: 2012-Aug-23 17:53:30 Not After: 2030-Aug-23 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 071a25fa76a200da3c53f1ee791e7b627d32c349 Thumbprint Algorithm: sha2 Thumbprint 49695A5F0F7EF6EDF698193D99ED48BAADE20EA457403C11CEAD492C458665DA	
	Issuer	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key:RSA(2048 bits) Authority Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Subject Key Identifiers: 6e bd a1 2b ce e4 c2 d5 28 74 5c bd d9 8c 6f 04 72 2a 06 de Basic Constraint: Subject Type=CA Path Length Constraint=0 Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global Root CA G2	TWCA Global Root CA G2(Cross)	
	Subject	
	CN = TWCA Global Root CA G2 OU = Root CA O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 4001348d1900000000000000ccce78f26 Signature Algorithm: sha384RSA Not Before: 2022-Dec-9 11:44:17 Not After: 2030- Dec-9 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 27ce93669629b5e45a61122addcf7a9cae2936a9 Thumbprint Algorithm: sha2 Thumbprint D53BF4968A7DB3C8C4E3366F2C7F76AD61B7041DFEFC64C1902C499A6FFFF241	
	Issuer	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 92 8c d4 36 d1 5b 47 53 c4 71 0d 84 dd 64 2a f5 36 64 40 e7 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global Root CA G2	TWCA Global Root CA G2
	Subject
	CN = TWCA Global Root CA G2 OU = Root CA O = TAIWAN-CA C = TW
	Certificate Related Information
	Serial Number 4001348cc2000000000000000019758f4 Signature Algorithm: sha384RSA Not Before: 2022-Nov-22 14:42:21 Not After: 2047- Nov-22 23:59:59 Thumbprint Algorithm: sha1 Thumbprint 73fe922f836391ffc8c6c4dad6202f6b072e7f1b Thumbprint Algorithm: sha2 Thumbprint 3A0072D49FFC04E996C59AEB75991D3C340F3615D6FD4DCE90AC0B3D88EAD4F4
	Issuer
	CN = TWCA Global Root CA G2 OU = Root CA O = TAIWAN-CA C = TW
	Key Related Information
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 92 8c d4 36 d1 5b 47 53 c4 71 0d 84 dd 64 2a f5 36 64 40 e7 Basic Constraint: Subject Type=CA Path Length Constraint= None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)

TWCA Root Certification Authority	TWCA Root Certification Authority(2048)	
	Subject	
	CN = TWCA Root Certification Authority OU = Root CA O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number 01 Signature Algorithm: sha1RSA Not Before: 2008-Aug-28 15:24:33 Not After: 2030-Dec-31 23:59:59 Thumbprint Algorithm: sha1 Thumbprint cf9e876dd3ebfc422697a3b5a37aa076a9062348 Thumb print Algorithm: sha2 Thumbprint BFD88FE1101C41AE3E801BF8BE56350EE9BAD1A6B9BD515EDC5C6D5B8711AC44	
	Issuer	
	CN = TWCA Root Certification Authority OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(2048 bits) Subject Key Identifiers: 6a 38 5b 26 8d de 8b 5a f2 4f 7a 54 83 19 18 e3 08 35 a6 ba Basic Constraint: Subject Type=CA Path Length Constraint=None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	

TWCA Global Root CA	TWCA Global Root CA(Cross)	
	Subject	
	CN = TWCA Global Root CA OU = Root CA O = TAIWAN-CA C = TW	
	Certificate Related Information	
	Serial Number: 40013353e40000000000000cca5d1b69	
	Signature Algorithm: sha256RSA	
	Not Before: 2014-Oct-28 15:38:31	
	Not After: 2030-Oct-28 23:59:59	
	Thumbprint Algorithm: sha1 Thumbprint fd54e4643b49705a2aaae50653c4f56c2df8083d	
	Thumbprint Algorithm: sha2 Thumbprint 8AD47F6D70A44FA80AF0F931125FFE3A76876FFAD219A4D40A13C038DC85E69E	
	Issuer	
	CN = TWCA Root Certification Authority OU = Root CA O = TAIWAN-CA C = TW	
	Key Related Information	
	Subject Public Key: RSA(4096 bits) Subject Key Identifiers: 48 db cd de 8e e9 49 72 5a 88 e8 b1 d8 3d 07 b3 b9 6b 66 50 Basic Constraint: Subject Type=CA Path Length Constraint=None Key Usage: Certificate Signing, Off-line CRL Signing, CRL Signing (06)	