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## REPORT OF THE INDEPENDENT ACCOUNTANT

To the management of Viking Cloud, Inc.:

## Scope

We have examined Viking Cloud, Inc., a Sysnet North America, Inc. subsidiary ("VikingCloud"), management's <u>assertion</u> that for its Certification Authority ("CA") operations in Chicago, Illinois and Dallas, Texas, in the United States of America, for its CAs as enumerated in <u>Attachment B</u>, VikingCloud has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environmental control practices in the applicable versions of its VikingCloud Certificate Policy and Certification Practices Statement ("CP/CPS") enumerated in <u>Attachment A</u>
- maintained effective controls to provide reasonable assurance that VikingCloud provides its services in accordance with its CP/CPS
- maintained effective controls to provide reasonable assurance that:
  - the integrity of keys and certificates it manages is established and protected throughout their lifecycles;
  - the integrity of certificates it manages is established and protected throughout their lifecycles; and
  - subscriber information is properly authenticated (for the registration activities performed by VikingCloud)
- maintained effective controls to provide reasonable assurance that:
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - o the continuity of key and certificate management operations is maintained; and
  - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity

throughout the period September 1, 2023 to August 31, 2024, based on the WebTrust Principles and Criteria for Certification Authorities v2.2.2.

VikingCloud makes use of external registration authorities for subscriber registration activities of client authentication certificates as disclosed in VikingCloud's business practices. Our examination did not extend to the controls exercised by these external registration authorities.

VikingCloud does not escrow its CA keys. VikingCloud does not provide subscriber key generation services, subscriber key storage and recovery services, integrated circuit card lifecycle management services, certificate suspension services, or subordinate CA certificate and cross certificate lifecycle management services to third parties. Accordingly, our examination did not extend to controls that would address those criteria.

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BDO USA, P.C. is the U.S. member of BDO International Limited, a UK company limited by guarantee, and forms part of the international BDO network of independent member firms.



## **Certification Authority's Responsibilities**

VikingCloud's management is responsible for its assertion, including the fairness of its presentation, and the provision of its described services in accordance with the <u>WebTrust Principles and Criteria for Certification Authorities v2.2.2.</u>

## Independent Accountant's Responsibilities

Our responsibility is to express an opinion on management's assertion based on our examination. Our examination was conducted in accordance with attestation standards established by the American Institute of Certified Public Accountants. Those standards require that we plan and perform the examination to obtain reasonable assurance about whether management's assertion is fairly stated, in all material respects. An examination involves performing procedures to obtain evidence about management's assertion. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of management's assertion, whether due to fraud or error. We believe that the evidence we obtained is sufficient and appropriate to provide a reasonable basis for our opinion.

We are required to be independent and to meet our other ethical responsibilities in accordance with relevant ethical requirements relating to the engagement.

The relative effectiveness and significance of controls at VikingCloud 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. Our examination did not extend to controls at individual subscriber and relying party locations and we have not evaluated the effectiveness of such controls.

#### **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 unauthorized 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.

## Independent Accountant's Opinion

In our opinion, management's assertion, as referred to above, is fairly stated, in all material respects.

This report does not include any representation as to the quality of VikingCloud's services other than its CA operations in Chicago, Illinois, and Dallas, Texas, in the United States of America, nor the suitability of any of VikingCloud's services for any customer's intended purpose.



## Other Matters

Without modifying our opinion, we noted the following other matters during our procedures:

N	atter Topic	Matter Description
1	Certificate	VikingCloud disclosed in Mozilla Bug #1883779 that it had
	Content	misissued 3,167 OV and 41 EV TLS certificates with incorrect
		Subject RDN attribute encoding order.
2	Certificate	VikingCloud disclosed in Mozilla Bug #1885568 that 3,082 OV
	Revocation	and 25 EV TLS certificates that were revoked later than the
		5 day requirement.
3	Certificate	VikingCloud disclosed in Mozilla Bug #1888667 that for a
	Problem Reporting	Certificate Problem Report that it received, it did not send a
		preliminary report of its findings to two subscribers of
		affected certificates.
4	Certificate Status	VikingCloud disclosed in Mozilla Bug #1858965 that it was
	Validation	providing incorrect OCSP responses for 7 precertificates that
		had no corresponding issued certificate.
5	Physical Security	VikingCloud disclosed in Mozilla Bug #1902195 that an
		unplanned access event occurred for a physically secured
		environment containing CA infrastructure and network
		equipment. The CA infrastructure and network equipment
		were not accessed.

While the VikingCloud assertion notes all issues disclosed on Bugzilla from September 1, 2023 through the date of this report, we have only noted those instances relevant to the CAs enumerated in Attachment B and applicable to the WebTrust Principles and Criteria for Certification Authorities v2.2.2.

## Use of the WebTrust Seal

VikingCloud's use of the WebTrust for Certification Authorities 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.

## BDO USA

November 22, 2024



# ATTACHMENT A - CERTIFICATION PRACTICE STATEMENT AND CERTIFICATE POLICY VERSIONS IN-SCOPE

Policy Name	Policy Version	Policy Date
VikingCloud Certificate Policy and Certification Practices Statement	Version 7.7	August 14, 2024
VikingCloud Certificate Policy and Certification Practices Statement	Version 7.6	November 29, 2023
VikingCloud Certificate Policy and Certification Practices Statement	Version 7.5	August 31, 2023



## **ATTACHMENT B - IN-SCOPE CAs**

Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
CN = XRamp Global Certification Authority O = XRamp Security Services Inc OU = www.xrampsecurity.com C = US	CECDDC905099D8DADFC5B1D209B737CBE2C18CFB2C10C0FF0BCF0D3286FC1AA2	11/1/2004	1/1/2035
CN = SecureTrust CA O = SecureTrust Corporation C = US	F1C1B50AE5A20DD8030EC9F6BC24823DD367B5255759B4E71B61FCE9F7375D73	11/7/2006	12/31/2029
CN = Secure Global CA O = SecureTrust Corporation C = US	4200F5043AC8590EBB527D209ED1503029FBCBD41CA1B506EC27F15ADE7DAC69	11/7/2006	12/31/2029
CN = Trustwave Global Certification Authority O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	97552015F5DDFC3C8788C006944555408894450084F100867086BC1A2BB58DC8	8/23/2017	8/23/2042
CN = Trustwave Global ECC P256 Certification Authority O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	945BBC825EA554F489D1FD51A73DDF2EA624AC7019A05205225C22A78CCFA8B4	8/23/2017	8/23/2042
CN = Trustwave Global ECC P384 Certification Authority O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	55903859C8C0C3EBB8759ECE4E2557225FF5758BBD38EBD48276601E1BD58097	8/23/2017	8/23/2042
C=US O=Viking Cloud, Inc. CN=VikingCloud TLS RSA Root 1	548D27778822346B9EEE3CB4621BDFE2DBDC50588DA68C5E3632301F8E62ECAB	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc. CN=VikingCloud TLS ECC Root 1	C3C040E805CE774763501CCF47B617275215B7DBF777C58B950FD4650673F3BB	2/5/2024	2/3/2049



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C=US O=Viking Cloud, Inc. CN=VikingCloud SMIME RSA Root 1	7714BED9406C95F02A1C68ED4A07710FA65333E1A4F7CDCBA7ED746FDAA07F40	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc. CN=VikingCloud SMIME ECC Root 1	70817538CF55A6CC405D506AEF6B50AE6026C90EB6FB076841C4A6B02835183E	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc. CN=VikingCloud Client RSA Root 1	9DBE6AB710C7F1EAD52867053CE052B8EFCFBC9B2763B8861260D1B336E61C63	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc. CN=VikingCloud Client ECC Root 1	737F973ACE76DFE14F8AB8FC5C78B4EA8232F38668558AA3DCBF572EA4DA0020	2/5/2024	2/3/2049



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com CN = Trustwave Extended Validation SHA256 CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois	EEA36C0FFA3F54FFDB0CF14B3BD34A53EC7B775F54053DD8B07DFD2F8BEC9083	10/13/2014	10/10/2024
C = US  E = ca@trustwave.com  CN = Trustwave Extended  Validation SHA256 CA, Level 1  O = Trustwave Holdings, Inc.  L = Chicago  S = Illinois  C = US	49C58270F70F1BE0B7C19D1BC2C2EBC41E2FDE0D4885D4FA65EF0370ACEC7A00	9/1/2016	9/29/2024
E = ca@trustwave.com CN = Trustwave Secure Global Extended Validation CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	45B2B08E1B58948A028BE13A67C0E20D4B2466AE2B6EC6250EBB10FD6B7F8239	8/12/2015	8/9/2025
E = ca@trustwave.com CN = Trustwave XRamp Global Extended Validation CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	1D0CD7EF3C19265508E20E58B3538964F4A11ADEC8A71D8AB8A8AFF15683C6AE	8/12/2015	8/9/2025
C = US S = Illinois L = Chicago O = SecureTrust CN = SecureTrust Extended Validation CA, Level 1	DD23355C61D59970423004729795CAEF77AFDB39767A795740D4E04CB6158A99	1/29/2019	1/29/2029
C = US S = Illinois L = Chicago O = Trustwave Holdings, Inc. CN = Trustwave Global Extended Validation CA, Level 1	18626A3B7211128D563469C654557D13C9366D7FCEC8B94DB4F0AA7E05944041	2/6/2018	2/24/2028



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C = US	275BF0046E0270178B13B67E4DB150A10197CB71F9A061FAD36B3D76639FE186	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
256 Extended Validation CA,			
Level 1			
C = US	29F8E104DF38E612BF4F505365B5D0B0B20DD4E89C908306484EB8374C1E66D8	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
384 Extended Validation CA,			
Level 1			
E = ca@trustwave.com	FF1E0D233196B7EC20BEDFC65988E0AE1985EC6AC332A79ADFFE71B86BC0208A	10/1/2014	9/28/2024
CN = Trustwave Organization			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
E = ca@trustwave.com	58EA0688B7909AAA8EAAA2FFF36F3BBE8F4A2AD03BD70243B3903469DB4890F7	9/1/2016	9/29/2024
CN = Trustwave Organization			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
C = US	11D9330D1A2398508DD50D3094EB28B1B44900D9928F8C22B25EF7A781BDB403	1/29/2019	1/29/2029
S = Illinois			
L = Chicago			
O = SecureTrust			
CN = SecureTrust Organization			
Validation CA, Level 1			



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C = US S = Illinois L = Chicago	2E63DC1BECF427F9902B49DE6330FD3E8EEBF88B14E653B3BA2E37D4E4880965	2/6/2018	2/24/2028
O = Trustwave Holdings, Inc. CN = Trustwave Global Organization Validation CA, Level 1			
C = US S = Illinois L = Chicago O = Trustwave Holdings, Inc. CN = Trustwave Global ECDSA P- 256 Organization Validation CA, Level 1	18ABD6E9CA907BB36754D0C046EBB50DD9B95D527824D9581A31B750FCFDBAEF	2/6/2018	2/24/2028
C = US S = Illinois L = Chicago O = Trustwave Holdings, Inc. CN = Trustwave Global ECDSA P- 384 Organization Validation CA, Level 1	87D42169B2693551CA205CCF17F06F6E6651F7218CD6D26607BF5BA4DD2F26F2	2/6/2018	2/24/2028
E = ca@trustwave.com CN = Trustwave Domain Validation SHA256 CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	859968F9278B4DC82EE30FD118A5D297D284B687CB64CF9755AB8A9D38F2B70F	10/1/2014	9/28/2024
E = ca@trustwave.com CN = Trustwave Domain Validation SHA256 CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	74F56E1AB339D83E80F2F6E264F894775B426C89B44703DF4FA8A3231163A2BD	9/1/2016	9/29/2024



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C = US	5E60965804461930AC27B6DBE3445679EAE4131C22AFB88AF7ACF6A1917B5ABA	1/29/2019	1/29/2029
S = Illinois			
L = Chicago			
O = SecureTrust			
CN = SecureTrust Domain			
Validation CA, Level 1			
C = US	6782C6E9ADBF9216E268306D46333FBC674BDEDF86B67BE777079E2C0E36888E	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global Domain			
Validation CA, Level 1			
C = US	F62E35AAD345FB253863CFC0E65823ACD3E7F0846D19B8326D709C7919A22D7E	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
256 Domain Validation CA, Level			
1			
C = US	C63DF9618FBAF48662BA12ABE87B212CF777C27A446A0FA555D7A9D191148ED7	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
384 Domain Validation CA, Level			
1			
C = US	10B608E53E0F3F44432A32B906CD753001736AC8BFE90ED3A0847DF285E2D977	6/9/2022	12/15/2029
O = Viking Cloud, Inc.			
CN = Viking Cloud Extended			
Validation CA, Level 1			
C = US	0EEF05BDA7842EA85D1D9812495EFC561283BAA90D1431C579DD61F7ED9269A1	6/9/2022	12/15/2029
O = Viking Cloud, Inc.	0221 0355/1/0 1221 035 15/012 1/321 030 1235/1/05/1 13 103//550 11 / 25/25//1	0, 7, 2022	127 137 2027
CN = Viking Cloud Organization			
Validation CA, Level 1			
C = US	386AD965DA24812016ED3F011F2112DFD591693DABEB3D0E61B1145F5F9D1217	6/9/2022	12/15/2029
O = Viking Cloud, Inc.	300/10/30/12 TO 120 TOLD STOLD TO 10 10 10 10 10 10 10 10 10 10 10 10 10	07 77 2022	12/13/2027
CN = Viking Cloud Domain			
Validation CA, Level 1			
Tatidation CA, Level I	<u> </u>		



SSL Issuing CAs	SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To	
C=US	88762525867675B0049640C7CA7163A8DBE0DD76AD0B69917D824730C8A900D6	2/7/2024	2/6/2034	
O=Viking Cloud, Inc.				
CN=VikingCloud T1 Extended				
Validation RSA, Level 1				
C=US	9C26E5EFF31BB8F735C03CAE901E7282381F34FF7D94248BF43FFFC85DC82840	2/7/2024	2/6/2034	
O=Viking Cloud, Inc.				
CN=VikingCloud T1 Extended				
Validation ECC, Level 1				
C=US	94B949699B74368B27FAD14D1EEF1F2AA2AD6AC24399A24399398B013FFB9601	8/28/2024	8/28/2034	
O=Viking Cloud, Inc.				
CN=VikingCloud TWG TLS DV CA,				
Level 1				



S/MIME CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com CN = Trustwave S/MIME SHA256 CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	5C4BC597291AB9C7023FB6445FD60381A65C60DDD404F124E5FA143FE98B05F3	10/1/2014	9/28/2024
C = US O = SecureTrust CN = SecureTrust TWG Secure Email CA, Level 2	ACCCAAF77372FFD2BD7BB21861B224EE1DAE8FE640D03A8FDE7518EC9B32508B	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust TWG ECDSA P- 256 Secure Email CA, Level 2	B36BE2E3F72EC3FA03B2273EFF994F4F6F4F09B2DD7A28AF951BD38EC103F088	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust TWG ECDSA P- 384 Secure Email CA, Level 2	136A05614FDE8F94D8C1209B853F8F7FC487D233A280BD9902335DDB563EFDC5	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust Secure Email CA, Level 3	C9B767E33B955785458F569746D489B9A51C72B8160212B5DD5C9978125ED492	10/8/2020	10/8/2030
C = US O = Viking Cloud, Inc. CN = Viking Cloud Secure Email CA, Level 1	84071B259D851367E653E0E477A9ECDCA3F10453E1FE57A1EA5728F7934824C9	6/9/2022	6/9/2032
C=US O=Viking Cloud, Inc. CN=VikingCloud S1 SMIME RSA, Level 1	9A07F95DD4FFC0124D6AEBCD8D97B4DB87C5525903793AA5F736714E716C113C	2/7/2024	2/6/2034
C=US O=Viking Cloud, Inc. CN=VikingCloud S1 SMIME ECC, Level 1	B855F2484501A4A9B82F27C9639353FEC5FE3768448D17826FFF27BD69A62DA7	2/7/2024	2/6/2034
C=US O=Viking Cloud, Inc. CN=VikingCloud XG Secure Email CA, Level 1	434BF66BD4A8E461B810864D82D35C3100BE5D98E63C67C6CA7422FA6F75A1CC	8/28/2024	8/28/2034



Client Authentication CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com CN = Trustwave Client Authentication SHA256 CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois C = US	7FE20CEEE2B6972D862542060AE9A88FEA5E43A977A7FB25C95246F7F76C0668	10/1/2014	9/28/2024
C = US S = Illinois L = Chicago O = SecureTrust CN = SecureTrust Client Authentication CA, Level 1	2F50860F968053A7DBA17851341759B0D5C0412F857A2CD19F3731DD3BED1B6B	1/29/2019	1/29/2029
C = US O = SecureTrust CN = SecureTrust TWG Client CA, Level 3	5B78E6B05F0739429C50CDDEF3DBDC8813A456AB9619E82CF591392A9D0D3B26	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust TWG ECDSA P- 256 Client CA, Level 3	E92BE3F7D2A0FF65927B92EFB65B31BDDADB070999F8D6AA81273D9F90695C7B	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust TWG ECDSA P- 384 Client CA, Level 3	96CC051C0841630A05FD7F274F6EFB723F857B8B8CFFC0676765C1013100D22D	10/8/2020	10/8/2030
C = US O = Viking Cloud, Inc. CN = Viking Cloud Client Authentication CA, Level 1	115B4CCB4B7A8D2733085363311A3EE5A2603A4198483814E727181F0D45BB89	6/9/2022	12/15/2029
C=US O=Viking Cloud, Inc. CN=VikingCloud C1 Client RSA, Level 1	D44EA526E5B414B254A0C7CAB0A08F2A7AF34B7893DC6EF22F462DBA47C7F28F	2/7/2024	2/6/2034
C=US O=Viking Cloud, Inc. CN=VikingCloud C1 Client ECC, Level 1	1DCDF0D947E4884DA93FAB6DD1C108E381E9B8586F6342F1385001146E6E09BC	2/7/2024	2/6/2034



## VIKING CLOUD, INC. MANAGEMENT'S ASSERTION

Viking Cloud, Inc., a Sysnet North America, Inc. subsidiary ("VikingCloud"), operates the Certification Authority ("CA") services for its CAs enumerated in <u>Attachment B</u>, and provides the following CA services:

- Subscriber registration
- Certificate renewal
- Certificate rekey
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate validation

The management of VikingCloud is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure on its <u>repository</u>, CA business practices management, CA environmental controls, CA key lifecycle management controls, and certificate lifecycle management controls. These controls contain monitoring mechanisms, and actions are taken to correct deficiencies identified.

VikingCloud makes use of external registration authorities for subscriber registration authorities for specific client authentication subscriber registration activities as disclosed in VikingCloud's business practices. Our assertion did not extend to the controls exercised by these external registration authorities.

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 VikingCloud's CA operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

VikingCloud management has assessed its disclosures of its certificate practices and controls over its CA services. Based on that assessment, in VikingCloud management's opinion, in providing its CA services in Chicago, Illinois and Dallas, Texas, in the United States of America, VikingCloud has:

- maintained effective controls to provide reasonable assurance that VikingCloud provides its services in accordance with its CP/CPS
- maintained effective controls to provide reasonable assurance that:
  - the integrity of keys and certificates it manages is established and protected throughout their lifecycles;



- the integrity of certificates it manages is established and protected throughout their lifecycles; and
- subscriber information is properly authenticated (for the registration activities performed by VikingCloud)
- maintained effective controls to provide reasonable assurance that:
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - o the continuity of key and certificate management operations is maintained; and
  - CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity

throughout the period September 1, 2023 to August 31, 2024, based on the <u>WebTrust Principles</u> and <u>Criteria for Certification Authorities v2.2.2</u>, including the following:

## **CA Business Practices Disclosure**

- Certification Practice Statement (CPS)
- Certificate Policy (CP)

## **CA Business Practices Management**

- CPS Management
- CP Management

#### **CA Environmental Controls**

- Security Management
- Asset Classification and Management
- Personnel Security
- Physical and Environmental Security
- Operations Management
- System Access Management
- System Development, Maintenance, and Change Management
- Disaster Recovery, Backups, and Business Continuity Management
- Monitoring and Compliance
- Audit Logging

## **CA Key Lifecycle Management Controls**

- CA Key Generation
- CA Key Storage, Backup, and Recovery
- CA Public Key Distribution
- CA Key Usage
- CA Key Archival
- CA Key Destruction
- CA Key Compromise



- CA Cryptographic Hardware Lifecycle Management
- CA Key Transportation
- CA Key Migration

## Subscriber Key Lifecycle Management Controls

Requirements for Subscriber Key Management

## **Certificate Lifecycle Management Controls**

- Subscriber Registration
- Certificate Renewal
- Certificate Rekey
- Certificate Issuance
- Certificate Distribution
- Certificate Revocation
- Certificate Validation

VikingCloud does not escrow its CA keys. VikingCloud does not provide subscriber key generation services, subscriber key storage and recovery services, integrated circuit card lifecycle management services, certificate suspension services, or subordinate CA certificate and cross certificate lifecycle management services to third parties. Accordingly, our assertion does not extend to controls that would address those criteria.

VikingCloud has disclosed the following matters publicly on Mozilla Bugzilla's platform. These matters were included below due to being open during the period September 1, 2023 through the date of this report.

Bug ID	Summary	Opened	Closed	Resolution
<u>1826235</u>	VikingCloud: Incorrect organizationName	04/03/2023	09/02/2023	FIXED
<u>1858965</u>	VikingCloud: Incorrect OCSP Response	10/13/2023	01/10/2024	FIXED
1883779	VikingCloud: OV Precertificates with incorrect Subject RDN encoding order	03/05/2024	06/05/2024	FIXED
1885568	VikingCloud: Delayed revocation of TLS certificates in connection to bug #1883779	03/15/2024	1	OPEN
1888667	VikingCloud: Delayed preliminary report of CPR to affected Subscribers	03/29/2024	06/5/2024	FIXED
<u>1902195</u>	VikingCloud: Unplanned Access Event	06/12/2024	-	OPEN



11/22/2024

Mark Brady

President and Chief Operating Officer, Viking Cloud, Inc.



## ATTACHMENT A - CERTIFICATION PRACTICE STATEMENT AND CERTIFICATE POLICY VERSIONS IN-SCOPE

Policy Name	Policy Version	Policy Date
VikingCloud Certificate Policy and Certification Practices Statement	Version 7.7	August 14, 2024
VikingCloud Certificate Policy and Certification Practices Statement	Version 7.6	November 29, 2023
VikingCloud Certificate Policy and Certification Practices Statement	Version 7.5	August 31, 2023



## **ATTACHMENT B - IN-SCOPE CAs**

Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
CN = XRamp Global Certification Authority	CECDDC905099D8DADFC5B1D209B737CBE2C18CFB2C10C0FF0BCF0D3286FC1AA2	11/1/2004	1/1/2035
O = XRamp Security Services Inc			
OU = www.xrampsecurity.com			
C = US			
CN = SecureTrust CA	F1C1B50AE5A20DD8030EC9F6BC24823DD367B5255759B4E71B61FCE9F7375D73	11/7/2006	12/31/2029
O = SecureTrust Corporation			
C = US			
CN = Secure Global CA	4200F5043AC8590EBB527D209ED1503029FBCBD41CA1B506EC27F15ADE7DAC69	11/7/2006	12/31/2029
O = SecureTrust Corporation			
C = US			
CN = Trustwave Global	97552015F5DDFC3C8788C006944555408894450084F100867086BC1A2BB58DC8	8/23/2017	8/23/2042
Certification Authority			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
CN = Trustwave Global ECC P256	945BBC825EA554F489D1FD51A73DDF2EA624AC7019A05205225C22A78CCFA8B4	8/23/2017	8/23/2042
Certification Authority			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US		0.400.400.47	0.400.400.40
CN = Trustwave Global ECC P384	55903859C8C0C3EBB8759ECE4E2557225FF5758BBD38EBD48276601E1BD58097	8/23/2017	8/23/2042
Certification Authority			
O = Trustwave Holdings, Inc.			
L = Chicago S = Illinois			
C = US C=US	548D27778822346B9EEE3CB4621BDFE2DBDC50588DA68C5E3632301F8E62ECAB	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc.	J40DZ11100ZZJ40DYEEE3CD40Z1DDFEZDDDCJUJ00DA00CJEJ03ZJUIF8E0ZECAB	2/3/2024	2/3/2049
CN=Viking Cloud, Inc. CN=VikingCloud TLS RSA Root 1			
C=US	C3C040E805CE774763501CCF47B617275215B7DBF777C58B950FD4650673F3BB	2/5/2024	2/3/2049
0=Viking Cloud, Inc.	C3CU4UEOU3CE//4/033UTCCF4/D01/2/3213D/DDF///C30D93UFD403U0/3F3DD	2/3/2024	2/3/2049
CN=Viking Cloud, Inc. CN=VikingCloud TLS ECC Root 1			
CIN-VIKINGCIOUU TES ECC ROOL I	1		



Root CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C=US O=Viking Cloud, Inc.	7714BED9406C95F02A1C68ED4A07710FA65333E1A4F7CDCBA7ED746FDAA07F40	2/5/2024	2/3/2049
CN=Viking Cloud, Inc. CN=VikingCloud SMIME RSA Root			
C=US O=Viking Cloud, Inc. CN=VikingCloud SMIME ECC Root 1	70817538CF55A6CC405D506AEF6B50AE6026C90EB6FB076841C4A6B02835183E	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc. CN=VikingCloud Client RSA Root 1	9DBE6AB710C7F1EAD52867053CE052B8EFCFBC9B2763B8861260D1B336E61C63	2/5/2024	2/3/2049
C=US O=Viking Cloud, Inc. CN=VikingCloud Client ECC Root 1	737F973ACE76DFE14F8AB8FC5C78B4EA8232F38668558AA3DCBF572EA4DA0020	2/5/2024	2/3/2049



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com	EEA36C0FFA3F54FFDB0CF14B3BD34A53EC7B775F54053DD8B07DFD2F8BEC9083	10/13/2014	10/10/2024
CN = Trustwave Extended			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
E = ca@trustwave.com	49C58270F70F1BE0B7C19D1BC2C2EBC41E2FDE0D4885D4FA65EF0370ACEC7A00	9/1/2016	9/29/2024
CN = Trustwave Extended			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
E = ca@trustwave.com	45B2B08E1B58948A028BE13A67C0E20D4B2466AE2B6EC6250EBB10FD6B7F8239	8/12/2015	8/9/2025
CN = Trustwave Secure Global			
Extended Validation CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
E = ca@trustwave.com	1D0CD7EF3C19265508E20E58B3538964F4A11ADEC8A71D8AB8A8AFF15683C6AE	8/12/2015	8/9/2025
CN = Trustwave XRamp Global			
Extended Validation CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
C = US	DD23355C61D59970423004729795CAEF77AFDB39767A795740D4E04CB6158A99	1/29/2019	1/29/2029
S = Illinois			
L = Chicago			
0 = SecureTrust			
CN = SecureTrust Extended			
Validation CA, Level 1			



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C = US	18626A3B7211128D563469C654557D13C9366D7FCEC8B94DB4F0AA7E05944041	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global Extended			
Validation CA, Level 1			
C = US	275BF0046E0270178B13B67E4DB150A10197CB71F9A061FAD36B3D76639FE186	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
256 Extended Validation CA,			
Level 1			
C = US	29F8E104DF38E612BF4F505365B5D0B0B20DD4E89C908306484EB8374C1E66D8	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
384 Extended Validation CA,			
Level 1			
E = ca@trustwave.com	FF1E0D233196B7EC20BEDFC65988E0AE1985EC6AC332A79ADFFE71B86BC0208A	10/1/2014	9/28/2024
CN = Trustwave Organization			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
E = ca@trustwave.com	58EA0688B7909AAA8EAAA2FFF36F3BBE8F4A2AD03BD70243B3903469DB4890F7	9/1/2016	9/29/2024
CN = Trustwave Organization			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C = US	11D9330D1A2398508DD50D3094EB28B1B44900D9928F8C22B25EF7A781BDB403	1/29/2019	1/29/2029
S = Illinois			
L = Chicago			
O = SecureTrust			
CN = SecureTrust Organization			
Validation CA, Level 1			
C = US	2E63DC1BECF427F9902B49DE6330FD3E8EEBF88B14E653B3BA2E37D4E4880965	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global			
Organization Validation CA,			
Level 1			
C = US	18ABD6E9CA907BB36754D0C046EBB50DD9B95D527824D9581A31B750FCFDBAEF	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
256 Organization Validation CA,			
Level 1			
C = US	87D42169B2693551CA205CCF17F06F6E6651F7218CD6D26607BF5BA4DD2F26F2	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
384 Organization Validation CA,			
Level 1			
E = ca@trustwave.com	859968F9278B4DC82EE30FD118A5D297D284B687CB64CF9755AB8A9D38F2B70F	10/1/2014	9/28/2024
CN = Trustwave Domain			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com	74F56E1AB339D83E80F2F6E264F894775B426C89B44703DF4FA8A3231163A2BD	9/1/2016	9/29/2024
CN = Trustwave Domain			
Validation SHA256 CA, Level 1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
C = US	5E60965804461930AC27B6DBE3445679EAE4131C22AFB88AF7ACF6A1917B5ABA	1/29/2019	1/29/2029
S = Illinois			
L = Chicago			
O = SecureTrust			
CN = SecureTrust Domain			
Validation CA, Level 1			
C = US	6782C6E9ADBF9216E268306D46333FBC674BDEDF86B67BE777079E2C0E36888E	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global Domain			
Validation CA, Level 1			
C = US	F62E35AAD345FB253863CFC0E65823ACD3E7F0846D19B8326D709C7919A22D7E	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
256 Domain Validation CA, Level			
1			
C = US	C63DF9618FBAF48662BA12ABE87B212CF777C27A446A0FA555D7A9D191148ED7	2/6/2018	2/24/2028
S = Illinois			
L = Chicago			
O = Trustwave Holdings, Inc.			
CN = Trustwave Global ECDSA P-			
384 Domain Validation CA, Level			
1			
C = US	10B608E53E0F3F44432A32B906CD753001736AC8BFE90ED3A0847DF285E2D977	6/9/2022	12/15/2029
O = Viking Cloud, Inc.			
CN = Viking Cloud Extended			
Validation CA, Level 1			



SSL Issuing CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
C = US	0EEF05BDA7842EA85D1D9812495EFC561283BAA90D1431C579DD61F7ED9269A1	6/9/2022	12/15/2029
O = Viking Cloud, Inc.			
CN = Viking Cloud Organization			
Validation CA, Level 1			
C = US	386AD965DA24812016ED3F011F2112DFD591693DABEB3D0E61B1145F5F9D1217	6/9/2022	12/15/2029
O = Viking Cloud, Inc.			
CN = Viking Cloud Domain			
Validation CA, Level 1			
C=US	88762525867675B0049640C7CA7163A8DBE0DD76AD0B69917D824730C8A900D6	2/7/2024	2/6/2034
O=Viking Cloud, Inc.			
CN=VikingCloud T1 Extended			
Validation RSA, Level 1			
C=US	9C26E5EFF31BB8F735C03CAE901E7282381F34FF7D94248BF43FFFC85DC82840	2/7/2024	2/6/2034
O=Viking Cloud, Inc.			
CN=VikingCloud T1 Extended			
Validation ECC, Level 1			
C=US	94B949699B74368B27FAD14D1EEF1F2AA2AD6AC24399A24399398B013FFB9601	8/28/2024	8/28/2034
O=Viking Cloud, Inc.			
CN=VikingCloud TWG TLS DV CA,			
Level 1			



S/MIME CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com CN = Trustwave S/MIME SHA256 CA, Level 1 O = Trustwave Holdings, Inc. L = Chicago S = Illinois	5C4BC597291AB9C7023FB6445FD60381A65C60DDD404F124E5FA143FE98B05F3	10/1/2014	9/28/2024
C = US C = US O = SecureTrust CN = SecureTrust TWG Secure Email CA, Level 2	ACCCAAF77372FFD2BD7BB21861B224EE1DAE8FE640D03A8FDE7518EC9B32508B	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust TWG ECDSA P- 256 Secure Email CA, Level 2	B36BE2E3F72EC3FA03B2273EFF994F4F6F4F09B2DD7A28AF951BD38EC103F088	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust TWG ECDSA P- 384 Secure Email CA, Level 2	136A05614FDE8F94D8C1209B853F8F7FC487D233A280BD9902335DDB563EFDC5	10/8/2020	10/8/2030
C = US O = SecureTrust CN = SecureTrust Secure Email CA, Level 3	C9B767E33B955785458F569746D489B9A51C72B8160212B5DD5C9978125ED492	10/8/2020	10/8/2030
C = US O = Viking Cloud, Inc. CN = Viking Cloud Secure Email CA, Level 1	84071B259D851367E653E0E477A9ECDCA3F10453E1FE57A1EA5728F7934824C9	6/9/2022	6/9/2032
C=US O=Viking Cloud, Inc. CN=VikingCloud S1 SMIME RSA, Level 1	9A07F95DD4FFC0124D6AEBCD8D97B4DB87C5525903793AA5F736714E716C113C	2/7/2024	2/6/2034
C=US O=Viking Cloud, Inc. CN=VikingCloud S1 SMIME ECC, Level 1	B855F2484501A4A9B82F27C9639353FEC5FE3768448D17826FFF27BD69A62DA7	2/7/2024	2/6/2034
C=US O=Viking Cloud, Inc. CN=VikingCloud XG Secure Email CA, Level 1	434BF66BD4A8E461B810864D82D35C3100BE5D98E63C67C6CA7422FA6F75A1CC	8/28/2024	8/28/2034



Client Authentication CAs			
Subject DN	SHA2 Thumbprint	Valid From	Valid To
E = ca@trustwave.com	7FE20CEEE2B6972D862542060AE9A88FEA5E43A977A7FB25C95246F7F76C0668	10/1/2014	9/28/2024
CN = Trustwave Client			
Authentication SHA256 CA, Level			
1			
O = Trustwave Holdings, Inc.			
L = Chicago			
S = Illinois			
C = US			
C = US	2F50860F968053A7DBA17851341759B0D5C0412F857A2CD19F3731DD3BED1B6B	1/29/2019	1/29/2029
S = Illinois			
L = Chicago			
O = SecureTrust			
CN = SecureTrust Client			
Authentication CA, Level 1			
C = US	5B78E6B05F0739429C50CDDEF3DBDC8813A456AB9619E82CF591392A9D0D3B26	10/8/2020	10/8/2030
0 = SecureTrust			107 07 2000
CN = SecureTrust TWG Client			
CA, Level 3			
C = US	E92BE3F7D2A0FF65927B92EFB65B31BDDADB070999F8D6AA81273D9F90695C7B	10/8/2020	10/8/2030
O = SecureTrust	E/25231/52A01103/2/5/221503531555A55010///1050AA012/35/1/00/3C/5	107 07 2020	107 07 2030
CN = SecureTrust TWG ECDSA P-			
256 Client CA, Level 3			
C = US	96CC051C0841630A05FD7F274F6EFB723F857B8B8CFFC0676765C1013100D22D	10/8/2020	10/8/2030
O = SecureTrust	70CC031C0041030A031D7127410L1D7231037D0D0C11C0070703C1013100D22D	107 07 2020	107 07 2030
CN = SecureTrust TWG ECDSA P-			
384 Client CA, Level 3			
C = US	115B4CCB4B7A8D2733085363311A3EE5A2603A4198483814E727181F0D45BB89	6/9/2022	12/15/2029
O = Viking Cloud, Inc.		0/ 9/ 2022	12/13/2029
CN = Viking Cloud Client			
Authentication CA, Level 1			
C=US	D44EA526E5B414B254A0C7CAB0A08F2A7AF34B7893DC6EF22F462DBA47C7F28F	2/7/2024	2/6/2034
O=Viking Cloud, Inc.	DAALAJZULJDA PADZJAAUC/CADUAUOFZA/AFJAD/073DCUEFZZF40ZDDA4/C/FZ0F	2///2024	2/0/2034
CN=VikingCloud C1 Client RSA,			
Level 1			
C=US	1DCDF0D947E4884DA93FAB6DD1C108E381E9B8586F6342F1385001146E6E09BC	2/7/2024	2/6/2034
	IDCDFUD74/E4004DAY3FAD0DDICIU0E301EYD0300F0342F1303UU1140E0EUYBC	2///2024	2/0/2034
O=Viking Cloud, Inc.			
CN=VikingCloud C1 Client ECC,			
Level 1			1