TÜV AUSTRIA GMBH

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Certification Body

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TÜV ®

Certification Body

Managing director:
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Company register court:
Wien / FN 288476 f

Banking details:
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AT131200052949001066
BIC BKAUATWW

UID ATU63240488
DVR 3002477

TLS EV Audit Attestation for

SwissSign AG

Reference: AA2023091403

"Cologne, 2023-09-14"

To whom it may concern,
This is to confirm that TUV AUSTRIA GMBH has audited the CAs of the SwissSign AG without critical findings.
This present Audit Attestation Letter is registered under the unique identifier number "AA2023091403" covers multiple Root-CAs and consists of 15 pages. This audit attestation is issued based on the report number TA235224304_SR. Predecessors are Audit Attestation letters AA2022113001_V2 as of 2023-01-17 and AA2022113004, AA2022113006 as of 2022-11-30 which it supersedes.

Kindly find here below the details accordingly.

In case of any question, please contact:

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With best regards,

i.A. Clemens Wanko

i.V. Andreas Dvorak

General audit information

Identification of the conformity assessment body (CAB) and assessment organization acting as ETSI auditor
• CAB *TÜV AUSTRIA GMBH* *TÜV AUSTRIA-Platz 1, 2345 Brunn am Gebirge,* registered under: Vienna / Wien / FN 288476 f • Accredited by Federal Ministry for Digital and Economic Affairs, Stubenring 1, 1010 Wien, Austria (mailto: akkreditierung@bmdw.gv.at, https://akkreditierung-austria.gv.at/) under registration 0944[1] for the certification of trust services according to "EN ISO/IEC 17065:2012" and "ETSI EN 319 403 V2.2.2 (2015-08)" / "ETSI EN 319 403-1 V2.3.1 (2020-06)". • Insurance Carrier (BRG section 8.2): Vienna Insurance Group Schottenring 30, 1010 Wien • Third-party affiliate audit firms involved in the audit: None.
Identification and qualification of the audit team
• Number of team members: 1 • Academic qualifications of team members: All team members have formal academic qualifications or professional training or extensive experience indicating general capability to carry out audits based on the knowledge given below and at least four years full time practical workplace experience in information technology, of which at least two years have been in a role or function relating to relevant trust services, public key infrastructure, information security including risk assessment/management, network security and physical security. • Additional competences of team members: All team members have knowledge of 1) audit principles, practices and techniques in the field of CA/TSP audits gained in a training course of at least five days; 2) the issues related to various areas of trust services, public key infrastructure, information security including risk assessment/management, network security and physical security; 3) the applicable standards, publicly available specifications and regulatory requirements for CA/TSPs and other relevant publicly available specifications including standards for IT product evaluation; and 4) the Conformity Assessment Body's processes. Furthermore, all team members have language skills appropriate for all organizational levels within the CA/TSP organization; note-taking, report-writing, presentation, and interviewing skills; and relevant personal attributes: objective, mature, discerning, analytical, persistent and realistic. • Professional training of team members:

[1] https://www.tuv.at/wp-content/uploads/2021/09/TA_GmbH_Akkreditierte_Zertifizierungsstelle-fuer-Produkte-17065-2012_2023-ID-0944.pdf

See “Additional competences of team members” above. Apart from that are all team members trained to demonstrate adequate competence in:
a) knowledge of the CA/TSP standards and other relevant publicly available specifications;
b) understanding functioning of trust services and information security including network security issues;
c) understanding of risk assessment and risk management from the business perspective;
d) technical knowledge of the activity to be audited;
e) general knowledge of regulatory requirements relevant to TSPs; and
f) knowledge of security policies and controls.

- Types of professional experience and practical audit experience:
  The CAB ensures, that its personnel performing audits maintains competence on the basis of appropriate education, training or experience; that all relevant experience is current and prior to assuming responsibility for performing as an auditor, the candidate has gained experience in the entire process of CA/TSP auditing. This experience shall have been gained by participating under supervision of lead auditors in a minimum of four TSP audits for a total of at least 20 days, including documentation review, on-site audit and audit reporting.
- Additional qualification and experience Lead Auditor:
  On top of what is required for team members (see above), the Lead Auditor
  a) has acted as auditor in at least three complete TSP audits;
  b) has adequate knowledge and attributes to manage the audit process; and
  c) has the competence to communicate effectively, both orally and in writing.
- Special skills or qualifications employed throughout audit:
  None.
- Special Credentials, Designations, or Certifications:
  All members are qualified and registered assessors within the accredited CAB.
- Auditors code of conduct incl. independence statement:
  Code of Conduct as of Annex A, ETSI EN 319 403 or ETSI EN 319 403-1 respectively.

Identification and qualification of the reviewer performing audit quality management

- Number of Reviewers/Audit Quality Managers involved independent from the audit team: 1
- The reviewer fulfils the requirements as described for the Audit Team Members above and has acted as an auditor in at least three complete CA/TSP audits.

Identification of the CA / Trust Service Provider (TSP):	*SwissSign AG* *Sägereistraße 25* *CH-8152 Glattbrugg, Switzerland* *registered under: CHE-109.357.012*

Type of audit:	☐ Point in time audit ☐ Period of time, after x month of CA operation ☒ Period of time, full audit
Audit period covered for all policies:	2022-09-25 to 2023-06-16
Point in time date:	none, as audit was a period of time audit
Audit dates:	Stage 1: 2023-03-20 to 2023-04-28 Stage 2: 2023-05-02 to 2023-05-17 and 2023-06-05 to 2023-06-16
Audit location:	Zürich and Glattbrugg, Switzerland

Root 1: SwissSign Gold CA – G2

Standards considered:	European Standards: • ETSI EN 319 411-1 V1.3.1 (2021-05) • ETSI EN 319 401 V2.3.1 (2021-05) CA Browser Forum Requirements: • EV Guidelines for TLS Server Certificates, version 1.8.0 Browser Policy Requirements: • Mozilla Root Store Policy • Microsoft Trusted Root Program • Google Root Program • Apple Root Store Program Other: For the Trust Service Provider Conformity Assessment: • ETSI EN 319 403 V2.2.2 (2015-08) • ETSI EN 319 403-1 V2.3.1 (2020-06) • ETSI TS 119 403-2 V1.3.1 (2023-03)

The audit was based on the following policy and practice statement documents of the CA / TSP:

- *SwissSign CP EV - Certificate Policy for Extended Validation Certificates, version 2.0, as of 2022-08-15*
- *SwissSign TSPS - Trust Services Practice Statement, version 4.0, as of 2022-07-18*
- *SwissSign CPS TLS - Certification Practice Statement for TLS certificates", version 4.0, as of 2022-07-01*
- *SwissSign CPR TLS - Certificate, CRL and OCSP Profiles for TLS Certificates, version 5.0, as of 2022-09-30*

In the following areas, non-conformities have been identified throughout the audit:

Findings with regard to ETSI EN 319 401:
7.8 Network security
SwissSign shall improve the implementation of the pentesting.
[ETSI EN 319 401, REQ-7.8-14]
Findings with regard to ETSI EN 319 411-1:
6.2 Identification and authentication
SwissSign shall improve the validation process for certificate applications.
[ETSI EN 319 411-1, REG-6.2.2-02B]
6.3 Certificate Life-Cycle operational requirements
SwissSign shall improve the implementation for handling revocation requests.
[ETSI EN 319 411-1, REV-6.3.9-01]
6.5 Technical security controls
SwissSign shall improve the process for dealing with suspicious network activity.
[ETSI EN 319 411-1, OVR-6.5.5-07]
SwissSign shall improve its process for reviewing rights-management changes.
[ETSI EN 319 411-1, OVR-6.5.5-07]

All major non-conformities have been closed before the issuance of this attestation. For all minor non-conformities, remediation has been scheduled within three months after the onsite audit at latest and will be covered by a corresponding audit.

This Audit Attestation also covers the following incidents as described in the following.

- Bug 1815466, SwissSign AG: CRL/OCSP revocation time mismatch: https://bugzilla.mozilla.org/show_bug.cgi?id=1815466
- Bug 1798316, SwissSign AG: 'c/o' in streetAddress of EV certificate: https://bugzilla.mozilla.org/show_bug.cgi?id=1798316

The remediation measures taken by SwissSign AG as described on Bugzilla (see link above) have been checked by the auditors and properly addressed the incident.

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign Gold CA – G2, O = SwissSign AG, C = CH	62DD0BE9B9F50A163EA0F8E75C053B1ECA57EA55C8688F647C6881F2C8357B95	ETSI EN 319 411-1 V1.3.1, EVCP

Table 1: Root-CA 1 in scope of the audit

The TSP named the Sub-CAs that have been issued by the aforementioned Root-CA, that are listed in the following table and that have been covered in this audit.

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign RSA TLS Root CA 2021 - 1, O = SwissSign AG, C = CH	4E5666DAC579161CF00B8D87046D074D6C9C0C0E3994C653BE57998736C55D93	ETSI EN 319 411-1 V1.3.1, EVCP
CN = SwissSign RSA TLS Root CA 2022 - 1, O = SwissSign AG, C = CH	288B4A9F605B09B999B215850825C81F9B537DBAF23664ACA98BF6BA98EDC379	ETSI EN 319 411-1 V1.3.1, EVCP
CN = SwissSign RSA TLS Root CA 2021 - 1, O = SwissSign AG, C = CH	7EB8F631AD1C8408E9716AE920BCD677973B059E990AED01DDA5E1C5970B402C	ETSI EN 319 411-1 V1.3.1, EVCP
CN = SwissSign RSA TLS Root CA 2022 - 1, O = SwissSign AG, C = CH	193144F431E0FDDB740717D4DE926A571133884B4360D30E272913CBE660CE41	ETSI EN 319 411-1 V1.3.1, EVCP

Table 2: Intermediate-CA issued by the Root-CA (includes x-signed and self-signed root CA)

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign RSA TLS EV ICA 2021 - 1, O = SwissSign AG, C = CH	39CB199F41C6A82AAD83C2810127596D02CC4EC766D0DFE31B01D50D1774749F	ETSI EN 319 411-1 V1.3.1, EVCP
CN = SwissSign RSA TLS EV ICA 2022 - 1, O = SwissSign AG, C = CH	6AE61943BF4B4FCC8F08ED5044D1C97AA0AD40E1BCFE1BF1B530BD3B151B364D	ETSI EN 319 411-1 V1.3.1, EVCP

Table 3: CA issuing end entity certificates where the CA was issued by an Intermediate-CA

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign EV Gold CA 2014 - G22, O = SwissSign AG, C = CH	A434AAE4E15A5519E9B111FD08EC190FD2ADF13BBE30815C6E1606555CB31450	ETSI EN 319 411-1 V1.3.1, EVCP

Table 4: CA issuing end entity certificates issued by the Root-CA

Root 2: SwissSign RSA TLS Root CA 2021 - 1

Standards considered:	European Standards: • ETSI EN 319 411-1 V1.3.1 (2021-05) • ETSI EN 319 401 V2.3.1 (2021-05) CA Browser Forum Requirements: • EV Guidelines for TLS Server Certificates, version 1.8.0 Browser Policy Requirements: • Mozilla Root Store Policy • Microsoft Trusted Root Program • Google Root Program • Apple Root Store Program Other: For the Trust Service Provider Conformity Assessment: • ETSI EN 319 403 V2.2.2 (2015-08) • ETSI EN 319 403-1 V2.3.1 (2020-06) • ETSI TS 119 403-2 V1.3.1 (2023-03)

The audit was based on the following policy and practice statement documents of the CA / TSP:

- *SwissSign CP EV - Certificate Policy for Extended Validation Certificates, version 2.0, as of 2022-08-15*
- *SwissSign TSPS - Trust Services Practice Statement, version 4.0, as of 2022-07-18*
- *SwissSign CPS TLS - Certification Practice Statement for TLS certificates", version 4.0, as of 2022-07-01*
- *SwissSign CPR TLS - Certificate, CRL and OCSP Profiles for TLS Certificates, version 5.0, as of 2022-09-30*

In the following areas, non-conformities have been identified throughout the audit:

Findings with regard to ETSI EN 319 401:
7.8 Network security
SwissSign shall improve the implementation of the pentesting.
[ETSI EN 319 401, REQ-7.8-14]
Findings with regard to ETSI EN 319 411-1:
6.2 Identification and authentication
SwissSign shall improve the validation process for certificate applications.
[ETSI EN 319 411-1, REG-6.2.2-02B]
6.3 Certificate Life-Cycle operational requirements
SwissSign shall improve the implementation for handling revocation requests.
[ETSI EN 319 411-1, REV-6.3.9-01]
6.5 Technical security controls
SwissSign shall improve the process for dealing with suspicious network activity.
[ETSI EN 319 411-1, OVR-6.5.5-07]
SwissSign shall improve its process for reviewing rights-management changes.
[ETSI EN 319 411-1, OVR-6.5.5-07]

All major non-conformities have been closed before the issuance of this attestation. For all minor non-conformities, remediation has been scheduled within three months after the onsite audit at latest and will be covered by a corresponding audit.

This Audit Attestation also covers the following incidents as described in the following.

- Bug 1815466, SwissSign AG: CRL/OCSP revocation time mismatch: https://bugzilla.mozilla.org/show_bug.cgi?id=1815466
- Bug 1798316, SwissSign AG: 'c/o' in streetAddress of EV certificate: https://bugzilla.mozilla.org/show_bug.cgi?id=1798316

The remediation measures taken by SwissSign AG as described on Bugzilla (see link above) have been checked by the auditors and properly addressed the incident.

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign RSA TLS Root CA 2021 – 1, O = SwissSign AG, C = CH	7EB8F631AD1C8408E9716AE920BCD677973B059E990AED01DDA5E1C5970B402C	ETSI EN 319 411-1 V1.3.1, EVCP

Table 5: Root-CA 2 in scope of the audit

The TSP named the Sub-CAs that have been issued by the aforementioned Root-CA, that are listed in the following table and that have been covered in this audit.

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign RSA TLS EV ICA 2021 - 1, O = SwissSign AG, C = CH	39CB199F41C6A82AAD83C2810127596D02CC4EC766D0DFE31B01D50D1774749F	ETSI EN 319 411-1 V1.3.1, EVCP

Table 6: CA issuing end entity certificates issued by the Root-CA

Root 3: SwissSign RSA TLS Root CA 2022 - 1

Standards considered:	European Standards: • ETSI EN 319 411-1 V1.3.1 (2021-05) • ETSI EN 319 401 V2.3.1 (2021-05) CA Browser Forum Requirements: • EV Guidelines for TLS Server Certificates, version 1.8.0 Browser Policy Requirements: • Mozilla Root Store Policy • Microsoft Trusted Root Program • Google Root Program • Apple Root Store Program Other: For the Trust Service Provider Conformity Assessment: • ETSI EN 319 403 V2.2.2 (2015-08) • ETSI EN 319 403-1 V2.3.1 (2020-06) • ETSI TS 119 403-2 V1.3.1 (2023-03)

The audit was based on the following policy and practice statement documents of the CA / TSP:

- *SwissSign CP EV - Certificate Policy for Extended Validation Certificates, version 2.0, as of 2022-08-15*
- *SwissSign TSPS - Trust Services Practice Statement, version 4.0, as of 2022-07-18*
- *SwissSign CPS TLS - Certification Practice Statement for TLS certificates", version 4.0, as of 2022-07-01*
- *SwissSign CPR TLS - Certificate, CRL and OCSP Profiles for TLS Certificates, version 5.0, as of 2022-09-30*

In the following areas, non-conformities have been identified throughout the audit:

Findings with regard to ETSI EN 319 401:
7.8 Network security
SwissSign shall improve the implementation of the pentesting.
[ETSI EN 319 401, REQ-7.8-14]
Findings with regard to ETSI EN 319 411-1:
6.2 Identification and authentication
SwissSign shall improve the validation process for certificate applications.
[ETSI EN 319 411-1, REG-6.2.2-02B]
6.3 Certificate Life-Cycle operational requirements
SwissSign shall improve the implementation for handling revocation requests.
[ETSI EN 319 411-1, REV-6.3.9-01]
6.5 Technical security controls
SwissSign shall improve the process for dealing with suspicious network activity.
[ETSI EN 319 411-1, OVR-6.5.5-07]
SwissSign shall improve its process for reviewing rights-management changes.
[ETSI EN 319 411-1, OVR-6.5.5-07]

All major non-conformities have been closed before the issuance of this attestation. For all minor non-conformities, remediation has been scheduled within three months after the onsite audit at latest and will be covered by a corresponding audit.

This Audit Attestation also covers the following incidents as described in the following.

- Bug 1798316, SwissSign AG: 'c/o' in streetAddress of EV certificate: https://bugzilla.mozilla.org/show_bug.cgi?id=1798316

The remediation measures taken by SwissSign AG as described on Bugzilla (see link above) have been checked by the auditors and properly addressed the incident.

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign RSA TLS Root CA 2022 - 1, O = SwissSign AG, C = CH	193144F431E0FDDB740717D4DE926A571133884B4360D30E272913CBE660CE41	ETSI EN 319 411-1 V1.3.1, EVCP

Table 7: Root-CA 3 in scope of the audit

The TSP named the Sub-CAs that have been issued by the aforementioned Root-CA, that are listed in the following table and that have been covered in this audit.

Distinguished Name	SHA-256 fingerprint	Applied policy
CN = SwissSign RSA TLS EV ICA 2022 - 1, O = SwissSign AG, C = CH	6AE61943BF4B4FCC8F08ED5044D1C97AA0AD40E1BCFE1BF1B530BD3B151B364D	ETSI EN 319 411-1 V1.3.1, EVCP

Table 8: CA issuing end entity certificates issued by the Root-CA

Modifications record

Version	Issuing Date	Changes
Version 1	2023-09-14	Initial attestation

End of the audit attestation letter.