REPORT OF THE INDEPENDENT ACCOUNTANT

To the management of Amazon Trust Services, LLC (“ATS”):

Scope

We have examined ATS management’s assertion that for its Certification Authority (“CA”) operations in Washington and Virginia, in the United States of America, for its CAs as enumerated in Attachment B, ATS has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environment control practices in the applicable versions of its Amazon Trust Services Certification Practice Statement (“CPS”) and Amazon Trust Services Certificate Policy (“CP”) enumerated in Attachment A

- maintained effective controls to provide reasonable assurance that:
  - ATS’ CPS is consistent with its CP; and
  - ATS provides its services in accordance with its CP and 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 subscriber keys and certificates it manages is established and protected throughout their lifecycles;
  - subscriber information is properly authenticated; and
  - subordinate CA certificate requests are accurate, authenticated, and approved

- maintained effective controls to provide reasonable assurance that:
  - logical and physical access to CA systems and data is restricted to authorized individuals;
  - 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 January 16, 2022 to January 15, 2023, based on the WebTrust Principles and Criteria for Certification Authorities v2.2.2.

ATS does not escrow CA keys, does not provide subscriber key generation services, subscriber key storage and recovery services, integrated circuit card lifecycle management services, and certificate suspension services. Accordingly, our examination did not extend to controls that would address those criteria.
Certification Authority’s Responsibilities

ATS’ 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 v2.2.2.

Independent Accountant’s Responsibilities

Our responsibility is to express an opinion on ATS 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 specific controls at ATS 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 ATS’ services other than its CA operations in Washington and Virginia, in the United States of America, nor the suitability of any of ATS’ services for any customer’s intended purpose.
Other Matter

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

<table>
<thead>
<tr>
<th>Matter Topic</th>
<th>Matter Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 CA Certificate Content</td>
<td>Amazon Trust Services disclosed in Mozilla Bug #1743943 that revocation of one of the misissued CA certificates was delayed beyond the required timeline.</td>
</tr>
</tbody>
</table>

While the ATS assertion notes all issues disclosed on Bugzilla from January 16, 2022 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

ATS’ 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, LLP

April 6, 2023
ATTACHMENT A - CERTIFICATION PRACTICE STATEMENT AND CERTIFICATE POLICY VERSIONS IN-SCOPE

<table>
<thead>
<tr>
<th>Policy Name</th>
<th>Version</th>
<th>Effective Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Amazon Trust Services Certificate Policy</td>
<td>1.0.12</td>
<td>August 29, 2022</td>
</tr>
<tr>
<td>Amazon Trust Services Certificate Policy</td>
<td>1.0.11</td>
<td>August 18, 2021</td>
</tr>
<tr>
<td>Amazon Trust Services Certification Practices Statement</td>
<td>1.0.13</td>
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<tr>
<td>Amazon Trust Services Certification Practices Statement</td>
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### ATTACHMENT B - IN-SCOPE CAs

<table>
<thead>
<tr>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
<th>SPKI SHA256</th>
<th>Valid From</th>
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| CN = Amazon Root CA 1  
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2748177B01C45C2F4F9F3B  
E372A79B9650757D5A2 | 5/25/2015 | 1/16/2038 |
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121533C906C633EA2461 | 5/25/2015 | 5/25/2040 |
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1613C4BF21C787F5CABBEE  
4B348D58597B03D78BC9 | 5/25/2015 | 5/25/2040 |
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68B543C40E0743A89D10  
9254DCF845D4C7853C5 | 5/25/2015 | 5/25/2040 |
| CN = Starfield Services  
Root Certificate Authority - G2†  
O = Starfield Technologies, Inc.  
L = Scottsdale  
S = Arizona  
C = US | 56D6905A2C88708A4B3052190EDCFEDBB1974A606A13C6E5290FCB2AE63EDAB5 | 2B07FCA59A0A0AE7B0EOAD  
B2BAD23BAD45086E9C360  
18630C2EAF0613AFA83F92 | 8/31/2009 | 12/31/2037 |

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2748177B01C45C2F4F9F3B  
E372A79B9650757D5A2 | 5/25/2015 | 12/31/2037 |
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69623E64AB1AF381D8FA7  
121533C906C633EA2461 | 5/25/2015 | 12/31/2037 |

† ATS assumed operation of this Root CA on June 10, 2015. Starfield Technologies operated this CA prior to June 10, 2015 and was responsible for its key generation.
### Cross-Signed CA Certificates

<table>
<thead>
<tr>
<th>Subject DN</th>
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<td>543D9B7FC2A6471CD84FCA52C2CF6159DF83EBFCD88DB80B0B5AF3F88737F52E6</td>
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<td>5/25/2015</td>
<td>12/31/2037</td>
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### Intermediate CA Certificates

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<tr>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
<th>SPKI SHA256</th>
<th>Valid From</th>
<th>Valid To</th>
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<td>10/21/2015</td>
<td>10/18/2025</td>
</tr>
</tbody>
</table>
Amazon Trust Services, LLC (“ATS”) operates the Certification Authority (“CA”) services for the CAs enumerated in Attachment B, and provides the following CA services:

- Subscriber registration
- Certificate renewal
- Certificate rekey
- Certificate issuance
- Certificate distribution
- Certificate revocation
- Certificate validation
- Subordinate CA and cross-certification

The management of ATS is responsible for establishing and maintaining effective controls over its CA operations, including its CA business practices disclosure on its repository, CA business practices management, CA environmental controls, CA key lifecycle management controls, certificate lifecycle management controls, and subordinate CA 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 ATS’ CA operations. Furthermore, because of changes in conditions, the effectiveness of controls may vary over time.

ATS management has assessed its disclosures of its certificate practices and controls over its CA services. Based on that assessment, in ATS management’s opinion, in providing its CA services in Washington and Virginia, in the United States of America, ATS has:

- disclosed its business, key lifecycle management, certificate lifecycle management, and CA environment control practices in the applicable versions of its Amazon Trust Services Certification Practice Statement (“CPS”) and Amazon Trust Services Certificate Policy (“CP”) enumerated in Attachment A

- maintained effective controls to provide reasonable assurance that:
  o ATS’ CPS is consistent with its CP; and
  o ATS provides its services in accordance with its CP and CPS

- maintained effective controls to provide reasonable assurance that:
  o the integrity of keys and certificates it manages is established and protected throughout their lifecycles;
  o the integrity of subscriber keys and certificates it manages is established and protected throughout their lifecycles;
  o subscriber information is properly authenticated; and
  o subordinate CA certificate requests are accurate, authenticated, and approved
• maintained effective controls to provide reasonable assurance that:
  o 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
  o CA systems development, maintenance, and operations are properly authorized and performed to maintain CA systems integrity

throughout the period January 16, 2022 to January 15, 2023, based on the WebTrust Principles and Criteria for Certification Authorities v2.2.2, including the following:

CA Business Practices Disclosure
  • Certification Practice Statement (CPS)
  • Certificate Policy (CP)

CA Business Practices Management
  • Certification Practice Statement (CPS) Management
  • Certificate Policy (CP) Management
  • CP and CPS Consistency

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 Life Cycle 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

Subordinate CA and Cross Certificate Lifecycle Management Controls
• Subordinate CA Certificate and Cross Certificate Lifecycle Management

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

ATS did not delegate subscriber information authentication to any third parties. ATS maintained controls over subscriber information authentication for all certificates issued.

ATS has disclosed the following matters publicly on Mozilla’s Bugzilla platform. These matters were included below due to being open during the period January 16, 2022, through the date of this report:

<table>
<thead>
<tr>
<th>Bug ID</th>
<th>Summary</th>
<th>Opened</th>
<th>Closed</th>
<th>Resolution</th>
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</thead>
<tbody>
<tr>
<td>1743943</td>
<td>Amazon Trust Services - Delayed Revocation of Subordinate CA</td>
<td>12/1/2021</td>
<td>Open</td>
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<tr>
<td>1757615</td>
<td>Amazon Trust Services - Overdue audit statements for intermediate certificates</td>
<td>3/1/2022</td>
<td>3/25/2022</td>
<td>Fixed</td>
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<tr>
<td>1800405</td>
<td>Amazon Trust Services - DigiCert: 404 error when fetching CRL</td>
<td>11/13/2022</td>
<td>12/5/2022</td>
<td>Fixed</td>
</tr>
</tbody>
</table>

Jonathan Kozolchyk

Jonathan Kozolchyk
Vice President
Amazon Trust Services LLC

April 6, 2023
<table>
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<tr>
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## ATTACHMENT B - IN-SCOPE CAs

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48348D585978037ABCA9 | 5/25/2015 | 5/25/2040 |
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9254DCF845D4C27853C5 | 5/25/2015 | 5/25/2040 |
| CN = Starfield Services  
Root Certificate Authority - G2  
O = Starfield Technologies, Inc.  
L = Scottsdale  
S = Arizona  
C = US | 568D6905A2C88708A4B3025190EDCFEDB1974A606A13C6E5290FCB2AE63EDAB5 | 2B071C59A00A0E7600EAD  
B2BAD23BAD4580B69C360  
18630C2EAF0613AF83F92 | 8/31/2009 | 12/31/2037 |

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27E417B7D1C45C2F47F93B  
E372A17B96B50757D5A2 | 5/25/2015 | 12/31/2037 |
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O = Amazon  
C = US | 391220705B75BFC3ED3CD4B3631213F5692DF28226101E170799A5354AB12861 | 7F4296FC5864A3B53D3C3  
69623E64AB1AF381D8FA7  
121533C906C633EA2461 | 10/21/2015 | 12/31/2037 |
| CN = Amazon Root CA 3  
O = Amazon  
C = US | 8B35B460D66126312620645A5875A6A57E3C81D98476A97604244254EAC00F0 | 36ABC32656ACFC645C61B7  
1613C4BF21C787F5CAB8EE  
48348D585978037ABCA9 | 5/25/2015 | 12/31/2037 |

1 ATS assumed operation of this Root CA on June 10, 2015. Starfield Technologies operated this CA prior to June 10, 2015 and was responsible for its key generation.
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