REPORT OF THE INDEPENDENT ACCOUNTANT

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

Scope

For ATS’ Certification Authority (“CA”) operations in Washington and Virginia, in the United States of America, we have examined whether ATS:

- disclosed its code signing (“CS”) certificate lifecycle management business practices in the applicable versions of its ATS CPS and ATS CP as enumerated in Attachment A.

  including its commitment to provide CS certificates in conformity with the applicable Baseline Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates, and provided such services in accordance with its disclosed practices

- maintained effective controls to provide reasonable assurance that the integrity of keys and CS certificates it manages is established and protected throughout their lifecycles

And, for CAs as enumerated in Attachment C are only in scope for Principle 3: Extended Validation Code Signing Service Requirements:

- maintained effective controls to provide reasonable assurance that the integrity of keys and EV CS certificates it manages is established and protected throughout their lifecycles

throughout the period January 16, 2021 to January 15, 2022, based on the WebTrust Principles and Criteria for Certification Authorities - Code Signing Baseline Requirements v2.0.

Certification Authority’s Responsibilities

ATS’ management is responsible for these disclosures and for maintaining effective controls based on WebTrust Principles and Criteria for Certification Authorities - Code Signing Baseline Requirements v2.0.

Independent Accountant’s Responsibilities

Our responsibility is to express an opinion, based on our examination, about whether, for its CAs as enumerated in Attachment B, ATS has:

- disclosed its code signing (“CS”) certificate lifecycle management business practices in the applicable versions of its ATS CPS and ATS CP as enumerated in Attachment A.

  including its commitment to provide CS certificates in conformity with the applicable Baseline Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates, and provided such services in accordance with its disclosed practices
• maintained effective controls to provide reasonable assurance that the integrity of keys and CS certificates it manages is established and protected throughout their lifecycles

And, for CAs as enumerated in Attachment C are only in scope for Principle 3: Extended Validation Code Signing Service Requirements:

• maintained effective controls to provide reasonable assurance that the integrity of keys and EV CS certificates it manages is established and protected throughout their lifecycles throughout the period January 16, 2021 to January 15, 2022, based on the WebTrust Principles and Criteria for Certification Authorities - Code Signing Baseline Requirements v2.0.

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 the disclosures and controls listed above. An examination involves performing procedures to obtain evidence about the disclosures and controls listed above. The nature, timing, and extent of the procedures selected depend on our judgment, including an assessment of the risks of material misstatement of the disclosures and controls listed above, 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 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.

Basis for Qualified Opinion

During the examination period, we noted the following observation, which caused a qualification of our opinion:
<table>
<thead>
<tr>
<th>Impacted WebTrust Trust Principles and Criteria for Certification Authorities - Code Signing Baseline</th>
<th>Control Deficiency Noted</th>
</tr>
</thead>
</table>
| 2-9.1 The CA maintains controls to provide reasonable assurance that:  
• It operates a RFC-3161-compliant Timestamp Authority that is available for use by customers of its Code Signing Certificates  
• It recommends to Subscribers that they use the CA’s Timestamping Authority to time-stamp signed code. | ATS did not operate a timestamp authority during the examination period. |

Qualified Opinion

In our opinion, except for the matter described in the preceding table, ATS has, in all material respects:

- disclosed its code signing ("CS") certificate lifecycle management business practices in the applicable versions of its ATS CPS and ATS CP as enumerated in Attachment A.

  including its commitment to provide CS certificates in conformity with the applicable Baseline Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates, and provided such services in accordance with its disclosed practices

- maintained effective controls to provide reasonable assurance that the integrity of keys and CS certificates it manages is established and protected throughout their lifecycles

And, for CAs as enumerated in Attachment C are only in scope for Principle 3: Extended Validation Code Signing Service Requirements:

- maintained effective controls to provide reasonable assurance that the integrity of keys and EV CS certificates it manages is established and protected throughout their lifecycles throughout the period January 16, 2021 to January 15, 2022, based on the WebTrust Principles and Criteria for Certification Authorities - Code Signing Baseline Requirements v2.0.

This report does not include any representation as to the quality of ATS’ services other than its CA services 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 #1743935 that it had misissued CA certificates per its CP and CPS policy.</td>
</tr>
<tr>
<td></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>

BDO USA, LLP

April 8, 2022
### 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>1.0.11</td>
<td>August 18, 2021</td>
</tr>
<tr>
<td>Amazon Trust Services Certificate Policy</td>
<td>1.0.10</td>
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<td>Amazon Trust Services Certificate Policy</td>
<td>1.0.9</td>
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<td>Amazon Trust Services Certificate Policy</td>
<td>1.0.8</td>
<td>March 30, 2020</td>
</tr>
<tr>
<td>Amazon Trust Services Certification Practice Statement</td>
<td>1.0.12</td>
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<td>1.0.9</td>
<td>March 30, 2020</td>
</tr>
</tbody>
</table>
# Attachment B - List of CAs in Scope for Code Signing

## Root CAs

<table>
<thead>
<tr>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
<th>SPKI SHA256</th>
<th>Valid From</th>
<th>Valid To</th>
</tr>
</thead>
</table>
| CN = Amazon Root CA 1  
O = Amazon  
C = US | 8ECDE6884FD3D87B1125BA31AC3FCB13D7016DE7F57CC904FE1CB97C6AE98196E | FBE3018031F9586BCBF417  
27E417B7D1C45C2F47F93B  
E372A17B968B50757D5A2 | 5/25/2015 | 1/16/2038 |
| CN = Amazon Root CA 2  
O = Amazon  
C = US | 1BA5B2AA8C65401A82960118F80BEC4F62304D833ECC4713A19C39C011EA46DB4 | 7F4296FCS586A4E3B35D3C3  
69623E64AB1AF381DBFA7  
121533C9D6E363EA2461 | 5/25/2015 | 5/25/2020 |
| CN = Amazon Root CA 3  
O = Amazon  
C = US | 18CE6CFE7BF14E60B2E347BBFE868CB31D02E8B3ADA271569F50343B46DB3A4 | 36ABC32656ACF645C61B7  
1613C4BF21C787F5CABBE2E  
48348D58597B03D7ABC9 | 5/25/2015 | 5/25/2020 |
| CN = Amazon Root CA 4  
O = Amazon  
C = US | E35C28419ED02025CFA69038C623962458DA5C695FBDE3A3C22B0BF25897092 | F7ECD856C6047284ED4  
68B543C4E0743AB81D10  
9254DF843D4C2C7853C5 | 5/25/2015 | 5/25/2020 |
| CN = Starfield Services Root Certificate Authority - G2  
O = Starfield Technologies, Inc.  
L = Scottsdale  
S = Arizona  
C = US | 568D6905A2C88708A4B3025190EDCFEDB1974A606A13C6E5290FCB2AE63EDAB5 | 28071C59A0ADA76B0EAD  
B2BAD23BAD4580B69C360  
1B630C2EAF0613AFA83F92 | 8/31/2009 | 12/31/2037 |

## Cross-Signed Root CAs

<table>
<thead>
<tr>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
<th>SPKI SHA256</th>
<th>Valid From</th>
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</tr>
</thead>
</table>
| CN = Amazon Root CA 1  
O = Amazon  
C = US | 87DCD4DC74640A322CD205552506D1BE64F125962580654986B8450BC7206 | FBE3018031F9586BCBF417  
27E417B7D1C45C2F47F93B  
E372A17B968B50757D5A2 | 5/25/2015 | 12/31/2037 |
| CN = Amazon Root CA 2  
O = Amazon  
C = US | 391220705B758BF3ED3CD4B3631213F569D2CF8226101E170799A5354AB12861 | 7F4296FCS586A4E3B35D3C3  
69623E64AB1AF381DBFA7  
121533C9D6E363EA2461 | 10/21/2015 | 12/31/2037 |
| CN = Amazon Root CA 3  
O = Amazon  
C = US | 8B358466D66126312120645A5875A6A57E3C81D98476A967604244254EAC00F0 | 36ABC32656ACF645C61B7  
1613C4BF21C787F5CABBE2E  
48348D58597B03D7ABC9 | 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.
### Cross-Signed Root CAs

<table>
<thead>
<tr>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
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<th>Valid From</th>
<th>Valid To</th>
</tr>
</thead>
<tbody>
<tr>
<td>CN = Amazon Root CA 4</td>
<td>543D9B7FC2A6471CD84FCA52C2CF6159DF83EBFCD88D8B08B5AF3F88737F52E6</td>
<td>F7ECDED5C66047D28ED64 66B543C40E0743AB81D10 9254DCF845D4C2C7853C5</td>
<td>5/25/2015</td>
<td>12/31/2037</td>
</tr>
<tr>
<td>O = Amazon</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C = US</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
## ATTACHMENT C - LIST OF CAs IN SCOPE FOR EXTENDED VALIDATION CODE SIGNING

### Root CAs

<table>
<thead>
<tr>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
<th>SPKI SHA256</th>
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</thead>
</table>
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27E417BD71C45C2F47F93B | 5/25/2015 | 1/16/2038 |
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69623E64AB1AF381D8FA7 | 5/25/2015 | 5/25/2040 |
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C = US | 18CE6C7E8F14E60B2E347B8DE686CB31D02E833D5B46DB3A4 | 36ABC32656ACFC656C1B7  
1613C4BF21C787F5CABBEE | 5/25/2015 | 5/25/2040 |
| CN = Amazon Root CA 4  
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C = US | 568D6905A2C88708A4B302519E0DCFEDB1974A606A13C6E5290FCB2AE63E9B5 | 2B07C59A0DA0E6BOEAD  
B2AD23BAD4580B69C360 | 8/31/2009 | 12/31/2037 |

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27E417BD71C45C2F47F93B | 5/25/2015 | 12/31/2037 |
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O = Amazon  
C = US | 8B358466D6612631212064A5875A6A57E3C81D98476A967604244254EAC00F0 | 7F4296FCSB6A4E3B35D3C3 | 5/25/2015 | 5/25/2037 |
| CN = Amazon Root CA 3  
O = Amazon  
C = US | 40C826FDB22BA32A2F9DB4F94770F72B881DA9C8FFDA7B11E6F27AF245C89B5E | 36ABC32656FC6456C1B7  
1613C4BF21C787F5CABBEE | 5/25/2015 | 5/25/2037 |

2 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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<td>F7ECDED5C66047D28ED6466B543C40E0743ABE81D109254DCF845D4C2C7853CS</td>
<td>5/25/2015</td>
<td>12/31/2037</td>
</tr>
</tbody>
</table>
AMAZON TRUST SERVICES, LLC MANAGEMENT’S ASSERTION

Amazon Trust Services, LLC (“ATS”) operates the Certification Authority (“CA”) services for the CAs in scope enumerated in Attachment B and Attachment C, and provides code signing (“CS”) CA services.

ATS management has assessed its disclosures of its certificate practices and controls over its CS CA services. During our assessment, we noted the following observation, which caused the relevant criteria to not be met:

<table>
<thead>
<tr>
<th>Impacted WebTrust Trust Principles and Criteria for Certification Authorities - Code Signing Baseline Requirements</th>
<th>Control Deficiency Noted</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-9.1 The CA maintains controls to provide reasonable assurance that:</td>
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</tr>
<tr>
<td>• It operates a RFC-3161-compliant Timestamp Authority that is available for use by customers of its Code Signing Certificates</td>
<td></td>
</tr>
<tr>
<td>• It recommends to Subscribers that they use the CA’s Timestamping Authority to time-stamp signed code.</td>
<td>ATS did not operate a timestamp authority during the examination period.</td>
</tr>
</tbody>
</table>

Based on that assessment, in ATS management’s opinion, except for the matter described in the preceding table in providing its CS CA services in Washington and Virginia, in the United States of America, ATS has:

- disclosed its code signing (“CS”) certificate lifecycle management business practices in the applicable versions of its ATS Certification Practice Statement (“CPS”) and ATS Certificate Policy (“CP”) as enumerated in Attachment A.

including its commitment to provide CS certificates in conformity with the applicable Baseline Requirements for the Issuance and Management of Publicly-Trusted Code Signing Certificates, and provided such services in accordance with its disclosed practices

- maintained effective controls to provide reasonable assurance that the integrity of keys and CS certificates it manages is established and protected throughout their lifecycles

And, for CAs as enumerated in Attachment C are only in scope for Principle 3: Extended Validation Code Signing Service Requirements:

- maintained effective controls to provide reasonable assurance that the integrity of keys and EV CS certificates it manages is established and protected throughout their lifecycles throughout the period January 16, 2021 to January 15, 2022, based on the WebTrust Principles and Criteria for Certification Authorities - Code Signing Certificates v2.0.

During the examination period, ATS did not issue any CS subscriber certificates.
Jonathan Kozolchyk
Vice President
Amazon Trust Services, LLC

April 8, 2022
<table>
<thead>
<tr>
<th>Policy Name</th>
<th>Version</th>
<th>Effective Date</th>
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</table>
**ATTACHMENT B - LIST OF CAs IN SCOPE FOR CODE SIGNING**

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69623E364AB1AF381D8FA7  
121533C90633EA2461 | 5/25/2015 | 5/25/2040 |
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C = US | 18CE6CFE7BF14E60B2E347B8DFE868CB31D02EBB3ADA271569F50343B46DB3A4 | 36ABC32656ACF645C61B7  
1613C4BF21C787F5CABBE8  
4834B8597B03785C5 | 5/25/2015 | 5/25/2040 |
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O = Amazon  
C = US | E35D28419ED0205CFA69038CD623624580A5C695FBDEA3C2B0BF25897092 | F7ECD65C66047D28ED64  
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B2BAD23BAD4580B69C360  
1863OC2EAF0613AFA83F92 | 8/31/2009 | 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.

### Cross-Signed Root CAs

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27E4177B7D1C45C2F47F93B  
E372A17B96B50757D5A2 | 5/25/2015 | 12/31/2037 |
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C = US | 8B358466D66126312120645A5875A6A57E3C81D98476A967604242454EAC00F0 | 7F4296FC5B6A4E3B35D3C3  
69623E364AB1AF381D8FA7  
121533C90633EA2461 | 5/25/2015 | 12/31/2037 |
| CN = Amazon Root CA 3  
O = Amazon  
C = US | 40C826FDB22BA32A2F9DB4F94770F72B8B1DA9C8FFDA7B11E6F27AF245C89B5E | 36ABC32656ACF645C61B7  
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<td>5/25/2015</td>
<td>12/31/2037</td>
</tr>
<tr>
<td>Root CAs</td>
<td>Subject DN</td>
<td>SHA2 Thumbprint</td>
<td>SPKI SHA256</td>
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69623E464AB1AF381DBFA7 | 5/25/2015 | 5/25/2040 |
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C = US | 18CE6CFE7BF14E60B2E347BBDE868CB531D02EEB3ADA271569F50343B46DB3A4 | 36ABC32656AC645C61B7  
1613C4BF21C78F5CABBE | 5/25/2015 | 5/25/2040 |
| CN = Amazon Root CA 4  
O = Amazon  
C = US | E35D2B419ED02025C6A9038CD6294258DA5C695FBDEA3C22B0BFB25897092 | 7F4296FC6B4E63B43B5D33C3  
69623E464AB1AF381DBFA7 | 5/25/2015 | 5/25/2040 |
| CN = Starfield Services Root Certificate Authority · G2  
O = Starfield Technologies, Inc.  
L = Scottsdale  
S = Arizona  
C = US | 568D6905A2C88708A4B3025190EDC5F6E1774A606A13C6E5290FCB2AE63E8A5B | 2B017C59A0A0AE76B0EAD  
3F7AD23B5A5B869C360 | 8/31/2009 | 12/31/2037 |

<table>
<thead>
<tr>
<th>Cross-Signed Root CAs</th>
<th>Subject DN</th>
<th>SHA2 Thumbprint</th>
<th>SPKI SHA256</th>
<th>Valid From</th>
<th>Valid To</th>
</tr>
</thead>
</table>
| CN = Amazon Root CA 1  
O = Amazon  
C = US | 87DC4D4CC74640A322CD205552506D1BE64F12596258096544986B4850B72706 | FBE3018031F9586BCBF417  
27E417B7D1C45C2F47F93B | 5/25/2015 | 12/31/2037 |
| CN = Amazon Root CA 2  
O = Amazon  
C = US | 8B358466D66126312120645A5875A6A57EC819974874A697604244254EAC00F | 7F4296FC6B4E63B43B5D33C3  
69623E464AB1AF381DBFA7 | 5/25/2015 | 12/31/2037 |
| CN = Amazon Root CA 3  
O = Amazon  
C = US | 40CB2B6DBBBBA3224F9D84F94770F72801AD9C8FDA7B11E6F27AF245CB85E | 36ABC32656AC645C61B7  
1613C4BF21C78F5CABBE | 5/25/2015 | 12/31/2037 |

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2 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.
<table>
<thead>
<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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<tbody>
<tr>
<td>CN = Amazon Root CA 4 O = Amazon C = US</td>
<td>543D9B7FC2A6471CD84FCA52C2CF6159DF83EBFCDD88D8B08B5AF3F88737F52E6</td>
<td>F7ECDED5C66D47D28ED6466B543C40E0743ABE81D109254DCF845D4C2C7853C5</td>
<td>5/25/2015</td>
<td>12/31/2037</td>
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